OLD!

retro GAMER

THE ESSENTIAL GUIDE TO CLASSIC GAMES

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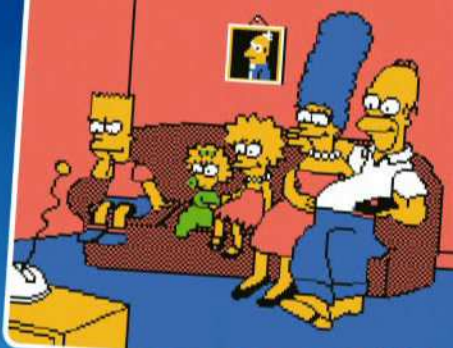
THE SIMPSONS HIT THE NES

GARRY AND DAN KITCHEN
REVEAL HOW THEY DIGITISED
TV'S MOST FAMOUS FAMILY

PLUS

AVALON AND
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AMIGA CD32
ANDREW BEALE
**DIGITAL
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11 OBSCURE GEMS
YOU NEED TO
PLAY TODAY

STREET FIGHTER

A SUPER COMBO OF DEVELOPERS REVEAL HOW
CAPCOM'S FIGHTER REMAINS KING OF THE RING

MAKING DONKEY KONG COUNTRY 2
GREGG MAYLES EXPLAINS HOW RARE
CREATED A BRAND-NEW KONG QUEST

UNLEASHING HITMAN: CODENAME 47
HOW IO INTERACTIVE MADE THE
ULTIMATE MURDER SIMULATOR

SLASHING APART SAMURAI SHODOWN
EVERYTHING YOU NEED TO KNOW
ABOUT SNK'S BRUTAL BRAWLER

FUTURE

LOAD 181

THE RETROBATES

FAVOURITE STREET FIGHTER GAME

DARRAN JONES

Street Fighter III: 3rd Strike due to its beautifully refined fight mechanics, exceptional animation and diverse range of interesting characters.
Expertise:
Juggling a gorgeous wife, two beautiful girls and an award-winning magazine
Currently playing:
Super Paper Mario
Favourite game of all time:
Strider

DREW SLEEP

It's a toss-up between *Super Street Fighter II* and *Street Fighter V,* but the newest game wins out for me. It just *feels* right in every way in its now-complete *Arcade Edition* form.
Expertise:
Forcing Rogue back into the *Hearthstone* meta
Currently playing:
Final Fantasy VII
Favourite game of all time:
Final Fantasy VIII

NICK THORPE

Street Fighter Alpha 3 always hits the sweet spot, with beautiful 2D graphics, mechanical depth and lots of great characters.
Expertise:
Owning five Master Systems (I sold two)
Currently playing:
Yakuza 6: The Song Of Life
Favourite game of all time:
Sonic The Hedgehog

SAM RIBBITS

I'm not massively into fighting games (which may or may not be down to how terrible I am at them). But *SFII* is my pick – Guile's theme is a classic!
Expertise:
Pixels
Currently playing:
Limbo
Favourite game of all time:
Croc: Legend Of The Gobbos

GRAEME MASON

Street Fighter II: Champion Edition on the Sega Mega Drive. Awesome competitive fun against friends or siblings.
Expertise:
Adjusting the tape azimuth with a screwdriver
Currently playing:
Dragon Age: Inquisition
Favourite game of all time:
Resident Evil 4

DAVID CROOKES

Street Fighter II at the arcades. That gave my wallet a real bashing at the time.
Expertise:
Amstrad, Lynx, adventures, Dizzy and PlayStation (but is it retro? Debate!)
Currently playing:
Fortnite
Favourite game of all time:
Broken Sword

PAUL DRURY

An obvious choice but *Street Fighter II,* for Dhalsim's convincing impression of Stretch Armstrong and my first glimpse of Chun-Li's spinning bird kick.
Expertise:
Atari concept art
Currently playing:
God of War
Favourite game of all time:
Sheep In Space

LOADING...

Surely everyone remembers the first time they experienced a *Street Fighter* game? For me it was in my local arcade. There were always people clamouring around the latest releases, so I actually saw a big crowd of people before I viewed the game itself. It instantly gained my attention, not because of its amazing visuals, but because the person playing it was pounding some gigantic pads for all they were worth. Transfixed, I patiently waited my turn, only to discover that the game was hard as nails.

I realised that the original game was a title I'd rather watch than play, but that changed with the release of *Street Fighter II.* Everything about it felt epic, from its stunning visuals to its diverse roster of characters. Pulling off special moves was a cinch compared to its predecessor and it arguably became a far more important game than the title that had spawned it.

Street Fighter has punched its way into pop culture in the way that only the most iconic games franchises can, and we're delighted to have been given the chance to discuss the essence of the franchise with some of its key creators, including Yoshinori Ono. We look at character and level design, mechanics and everything else that has made *Street Fighter* into the greatest brawler.

Enjoy the magazine!

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The 8–bit Architects

Sandy White and others reveal the difficulties of creating a bustling metropolis on gaming's early systems

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Street Fighter: Blow By Blow

Capcom's prize fighters reveal why this fighter is still at the top of its game after more than three decades of hadokens

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The Simpsons Hit The NES

Garry Kitchen and Dan Kitchen on converting America's most famous family to Nintendo's 8-bit console

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THE KING OF CON?

Billy Mitchell's high scores are expunged from Twin Galaxies

CONTENTS

After several months of research and investigation, Twin Galaxies has finally wiped Billy Mitchell's controversial *Donkey Kong* scores from its website. Additionally, all of his other scores have been deleted and he has also been banned from ever competing on the celebrated high score leaderboard again.

Rumblings about the authenticity of Billy's *Donkey Kong* scores first began when Jeremy 'Xelnia' Young, a member of Twin Galaxies' forums, left a huge in-depth post, which came to the conclusion that Billy's scores had been set on MAME and not on proper hardware as required by Twin Galaxies' rules. Information in the extensive two-part post explained how screens are drawn in on an original PCB and how they are drawn in with emulation. The findings revealed that all of Billy Mitchell's high scores over 1 million points were consistent with the patterning found via emulation and not on an original arcade board.

Young's claims were backed up by former record holder, Wes Copeland, who has been adding his own findings to the dispute, revealing via Twitter that Billy's scores featured blue barrel smashes (which grant higher points) which were well above the average for the mean and that there was evidence of splicing in certain places.

At the time of the original allegations, Billy Mitchell pleaded his innocence and revealed the following in an interview with Gamespot. "I'm the least tech savvy guy in the world, so I'd be lost without the kindness of people I've never met before, calling me with information and insight. In some ways, it's a bummer. There's a lot of other fun stuff I would rather be doing [than clearing my name]. But if it's a cross I have to bear for a while, that's okay."

Since the initial investigations, Twin Galaxies has now released a statement revealing that all of Billy Mitchell's *Donkey Kong* scores have now been removed. "Based on the complete body of evidence presented in this official dispute thread, Twin Galaxies has decided to remove all of Billy Mitchell's scores as well as ban him from participating in our competitive
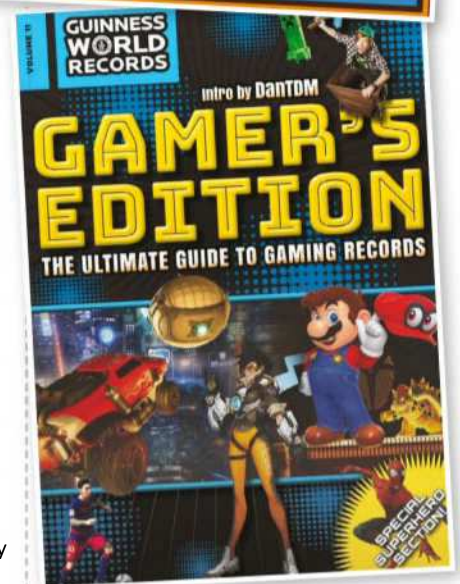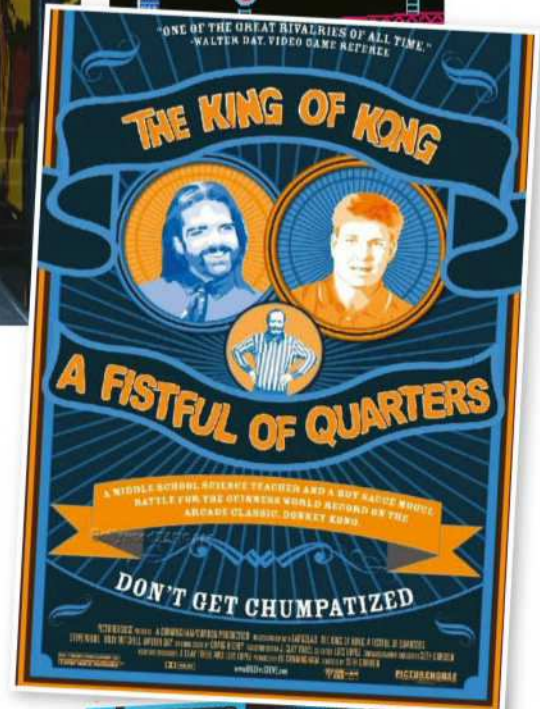
» Billy Mitchell was portrayed as a villain during *The King Of Kong*, with rival Steve Wiebe as the underdog.

» Peter Dinklage's role of Eddie Plant in *Pixels* is clearly based on Billy Mitchell, highlighting just what an impact Mitchell has had on gaming's culture.

> **" I wish I could hand it to you, but it's taking a considerable amount of time "**
>
> Billy Mitchell

leaderboards," it stated. Twin Galaxies also revealed that Mitchell had been able to answer questions in the dispute thread while the investigation has been taking place, but had declined to do so.

Twin Galaxies continued by mentioning that it now considers Steve Wiebe to be the first person to officially score over 1 million points in *Donkey Kong* and how important the company's integrity needs to be. Todd Rogers, who had one the longest-standing record on Twin Galaxies with the Atari 2600 game, *Dragster*, was similarly taken off the leaderboards and banned for life when his contested score couldn't be verified. Interestingly, he also verified one of Billy Mitchell's *Donkey Kong* scores when he was a referee for Twin Galaxies. "Anyone looking into their own past with honesty and a desire to improve will likely find things potentially messy and uncomfortable," the statement continued. "Twin Galaxies has experienced a nice big dose of that again with this dispute. However, Twin Galaxies understands this is required for it to continue its commitment to accuracy. As we all have learned, this

cannot occur overnight and must be a step-by-step process".

Guinness was quick to respond to the findings by Twin Galaxies, telling Kotaku that all of Mitchell's records will be removed, including those set for the first perfect score and highest score on *Pac-Man*. "The Guinness World Records titles relating to Mr Mitchell's highest scores on *Donkey Kong* have been disqualified due to Twin Galaxies being our source of verification for these achievements." It would appear that Mitchell's long-standing scores are soon to be a memory.

So where does this leave Steve Wiebe, who is now considered to be the first person to officially score over a million points on Donkey Kong? "I'm not the champ any more, but getting recognition for being the first to a million is a great consolation prize," he told *Variety* magazine in a recent statement. "That's what I was really bummed out about 11 years ago. Billy will have his turn to say something in response, for now I'm just in awe."

And true to form, Billy Mitchell did respond in a video statement on YouTube, which was issued by Old

School Gaming magazine (where he acts as an advisor, alongside the previous owner of Twin Galaxies, Walter Day).

"The fact of the matter is that there is a true, professional, due diligence being done to investigate things that happened as far as 35 years ago. In a professional manner, not in a shock jock mentality designed to create hits," he said. "We will show that everything that has been done, everything was done professionally, according to the rules, according to the scoreboard, the integrity that was set up. Not 2014 forward by the current regime who wants to reach back 35 years. Everything will be transparent, everything will be available – I wish I had it in my hands right now. I wish I could hand it to you, but it's taking a considerable amount of time. Witnesses, documents – everything will be made available to you, nothing will be withheld. You absolutely have my commitment to that.

It's unclear what evidence Mitchell believes he has, considering the overwhelming proof against him, but it's clear he believes this particular story isn't finished just yet. More news as it breaks. It is appearing though that the reign of one of gaming's most notable competitive celebrities is about to come to a close. ✻

» (Top) Billy Mitchell is perhaps best known for his role in Seth Gordon's *The King Of Kong*.

» (Above) Don't expect to find Mitchell's achievements in any future editions of Guinness' record books.

NEO-GE-WHOA!

SNK TEASES ITS OWN NEW CONSOLE

It appears that every publisher with a heritage is looking to create its own retro plug-and-play console and SNK is no exception. In addition to revealing a selection of classic 8-bit arcade games for the Switch, it would appear that SNK is also keen on creating its own mini console in the same way Nintendo and Sega has.

Very little has been revealed about the new system other than an image shown on social media that shows the device hidden under a draped cloth. It appears to be in the shape of a miniature arcade machine, which makes sense when you consider SNK's impressive arcade heritage. The company has been aggressively flooding the Switch, PS4 and Xbox One with a large number of its back catalogue, so it makes sense that it would also want to target the more casual gaming market or maybe even create a lavish product for hardcore fans.

It's worth remembering that SNK's last hardware release was the disappointing Neo-Geo X from Tommo Games, so it will be interesting to see what mistakes the company has learnt with this new machine. We'll have more news as we get it.

TO BE THIS GOOD TAKES SEGA

SEGA FANS MELT DOWN WITH THE ANNOUNCEMENT OF SHENMUE HD

It's finally happened. After years and years of constant badgering from fans, Sega has revealed that a HD collection of *Shenmue I & II* will be heading to PC and home consoles.

The exciting news was just one of many announcements from Sega, which included a veritable treasure trove of retro-themed announcements. The *Shenmue* announcement was easily the biggest, though, and Sega is calling the collection the 'definitive version' which will no doubt please everyone apart from Switch owners, who don't appear to be receiving a port at this moment in time.

Sega will be making numerous tweaks to the game, including fully scalable screen resolutions, numerous PC graphic options as well as the ability to enjoy Japanese or English voiceovers. More interestingly, there will be two types of control schemes as well, with the ability to choose between modern or classic controls.

Although it never sold enough to make back its gigantic $80 million outlay (the planned American Dreamcast release of *Shenmue II* fell through) *Shenmue* remains one of the Sega's best-loved franchises, so it's pleasing to see the company resurrect it. It also ensures that fans have something to play while they wait for *Shenmue III* to arrive later this year.

» [PS4] News on a HD version of *Shenmue* has been circulating since 2010 so it's great to see it's finally on the way.

Shenmue wasn't the only news that had fans reeling at Sega Fes 2018. The company also revealed a brand-new Mega Drive Mini to celebrate the console's 30th anniversary. It's initially due for release in Japan, but will be released in additional territories, including Europe. It's also worth noting that Sega's new machine is being made by AtGames – the company that has handled its previous plug-and-play machines – and its track record for past systems hasn't been fantastic. Its last release was a notable improvement, however, so we're optimistic that Sega will be paying a lot of attention to this particular version. As always though, wait for the definitive **Retro Gamer** verdict.

The retro love continued with the news that Nintendo's Switch would be receiving several games from the Sega Ages range, including *Alex Kidd In Miracle World*, *Gain Ground*, *Sonic The Hedgehog*, *Phantasy Star* and *Thunder Force IV*. Emulation duties are once again being handled by M2, so expect a selection of frightfully accurate versions that you'll be able to tweak to high heaven. Here's hoping that *Thunder Force III*, which was originally exclusive to the 3DS in Japan, will make the move, too.

» [Master System] Expect to be swimming around as Alex Kidd on Switch soon.

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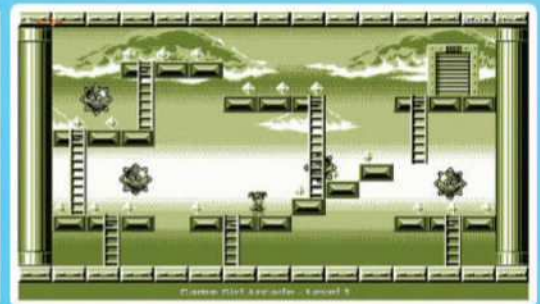
PLATAGO! IS OUT NOW ON STEAM!

Design for retro consoles – or make your own graphics from scratch!

The NES/SNES Book

Nintendo fans are sure to love this book, which covers two of the most popular consoles of the 2D era. Whether you want to find the best games for each platform, discover which games and peripherals are most prized by collectors, or even if you just fancy a guide to accompany your Nintendo Classic Mini plug-and-play consoles, this book has it all.

Price: £9.99 **From:** All good newsagents or myfavouritemagazines.co.uk

Knuckles T-shirt

Have you ever punched someone to stop them from stealing a precious gem? Are you easily duped by megalomaniacal scientists? Do you find yourself less prone to chuckling than flexing your muscles? If so, you've got a lot in common with Sonic's friendly rival Knuckles, so you should probably rep the red echidna with this T-shirt.

Price: £22.00
From: insertcoinclothing.com

Jaleco Brawler's Pack

If you're looking to bulk up your SNES collection and have a penchant for punch-ups, this officially licensed multi-game cartridge might be just what you've been looking for. Jaleco Brawler's Pack contains four games: the *Rushing Beat* trilogy (*Rival Turf*, *Brawl Brothers* and *Rushing Beat: Shura*) and *Tuff E Nuff*. As with other Retro-Bit multi-carts, the package includes some neat badges and stickers as extra bonus gifts.

Tuff E Nuff is a one-on-one fighting game which is pretty solid, but lacks the character roster to be much more than a diversion. The *Rushing Beat* games are a series of beat-'em-ups. The first game in the series is *Rival Turf*, a relatively early SNES game that is showing its age a bit. However, the sequels are a marked improvement. Brawl Brothers is a pretty enjoyable game and *Rushing Beat: Shura* (included over the inferior US version, *The Peace Keepers*) is one of the best beat-'em-ups on the SNES, and original carts usually sell for more than this collection.

Price: £26.99 **From:** amazon.co.uk

PICK OF THE MONTH

Going For Golden Eye Blu-Ray

Given recent events, the time feels right for a mockumentary on competitive retro gaming – and this film is exactly that, focusing on protagonist Ben's attempt to ascend to the top of the *GoldenEye* scene. In his way is Ethan, the reigning champion attempting to gain his 20th straight victory.

Price: £12.99
From: goingforgoldeneye.co.uk

Undisputed Street Fighter

If you're a Street Fighter fanatic that needs to know everything about their favourite fighter, this book is the resource you'll want. It's packed full of individual stories, sprites and concept art for your favourite characters, historical trivia (including some great looks at unfortunate merchandise) and of course insight from the developers that brought you the games.

Price: £34.99
From: amazon.co.uk

Here's my bio... Paul Rose

Paul Rose is probably better known as Mr Biffo – the creator and chief writer of legendary teletext games magazine *Digitiser*. These days, he mostly writes for kids TV, but can still be found rambling on about games, old and new, for his daily website, Digitiser2000.com.

Fighting familiarity

I have recently become fascinated by classic scrolling beat-'em-ups. Indeed, I've decided that it might, potentially, be my favourite genre of game. A really good scrolling beat-'em-up, for me, should be properly visceral. You should experience every punch. A good, meaty, 'Thwack!' sound needs to accompany every strike. When they get it right, when it's a combination of sound, visuals, and setting which all gels, there's no other genre which can give me the same rush.

And yet, that's only part of my interest in the genre. You see, they're a bit weird aren't they? Taken as a whole, it's probably the strangest genre of all. Barring obvious cosmetic differences, the scrolling beat-'em-up – as we think of it – is essentially a series of tropes and clichés. They're all, to a greater or lesser extent, much of a muchness.

You know what I mean, right? How, for example, whenever you clear one part of a level, the word 'Go!' will flash up on screen, urging you onwards. Why is it always 'Go'? Why not 'Move On' or maybe even "Proceed"?

Also, why are there always fresh, health-restoring, food hidden beneath piles of tyres inside vases, or even in the ruddy bin? Why's there always a level which takes place on an elevator platform? And a bunch of big, overweight, guys who'll try to crush you with a belly flop? And a whip-wielding dominatrix? And little, fast, hunched-over, guys with knives? And oil barrels just sitting around the places, precisely in the way they don't do in real life?

It should annoy me that these games are, essentially, identical save for the window dressing, yet somehow it doesn't. I mean, I hate plagiarism in almost every other department, yet there's something oddly comforting about the predictability of the scrolling beat-'em-up.

It's like… say you're a fan of blues music. Somebody who isn't an aficionado might complain that all blues songs sound the same, that it's just the same notes and same slidey, twangy, bits over and over, but in a different order. And to a certain degree they'd be right about that.

However, to the true fan, that familiarity is precisely what they want. They appreciate the subtle differences between songs, the way those familiar rhythms fall in new configurations, how the pacing changes. It's about finding the subtle differences in the identical.

What really amazes me is how few classic scrolling beat-'em-ups tried to do anything different. There are a few examples in the arcades which took an idiosyncratic approach – the Denjin Makai series has a huge combo system, Capcom's *Battle Circuit* jammed its tongue firmly into its cheek, and *Spider Man: The Video Game* incorporates elements of platforming.

Generally, though, barring the characters, the games we see as the tent poles of the genre – *Final Fight*, *Streets of Rage*, *Golden Axe* – are mostly interchangeable, barring their graphics.

Why? I don't know, but I remain intrigued. Why, when deciding to create a beat-'em-up, did they almost all choose to use a template rather than a blank slate? Answers on a pile of tyres. ✴

THE ULTIMATE GUIDE TO GAMING'S MOST ICONIC CHARACTER

Retro Gamer celebrates the legacy of Nintendo's greatest star, from Super Mario Bros to the stunning Super Mario Odyssey. Discover how the mascot to end all mascots was born.

Cleaning up the streets

MakinGames on bringing back the scrolling fighter with Raging Justice

Scrolling brawlers used to be everywhere in the Eighties and Nineties, but it's now a largely forgotten genre. The team at MakinGames wants to change all that with the release of *Raging Justice*. Director, Anna Makin, Nic Makin, Jay Howse and Steve Burke sat down to tell us more.

Where did the concept for *Raging Justice* originate?

Anna Makin: We all used to get together for a cheesy movie night starring actors such as Jean Claude Van Damme and Steven Seagal. It was on one of these nights that we got reminiscing about the good old days when we used to save up our pocket money for the arcades. We remembered our favourite side-scrolling brawlers, and while we couldn't agree on the best brawler, we agreed there ought to be a new brawler. If no one else was going to do it then we were!

Why did you choose to make a scrolling fighter?

Nic Makin: I'm a huge fan of arcade games, probably because they were the 'IMAX' of gaming back when I was growing up, home machines just couldn't compete, the look, the feel, the audio: they were leaps ahead of consoles and home computers. I always wanted to make an arcade game, and beat-'em-ups were the best of the best (for me), so this was a dream project.

What's the reason for the unique visual style?

Jay Howse: There are so many games out there so I think you have to stand out and create your own distinct look. We wanted the game to be 2D, but didn't want pixel art or cartoony hand-drawn sprites. The natural choice was to use prerendered sprites and backgrounds. It felt like it was retro enough to evoke the feeling of early arcade games, but different enough to give the game it's own visual identity.

What's been the hardest thing to achieve from a technical viewpoint?

Steve Burke: *Raging Justice* has some unexpected musical styles for the genre, along with a core retro-style synth score. Each level has its own set of music tracks, so there's plenty of variety. Every so often, for a bit of fun, I'll pop in something random like a Spanish guitar riff, circus-style music, or a Bach-inspired harpsichord motif, to join in with the Eighties synth, drums, and orchestra. Remember that D minor is the saddest of all the musical keys (according to Jay, our artist). Often the hardest thing in creating the soundtrack to a game is that first track. From the initial ideas the whole thing can unfold, so it was important to find a musical style that is instantly recognisable and unique to the game. My first track on this game ended up as the end credits, so sometimes it's a bit hit and miss.

» Artist, Jay Howse (left) developer, Nic Markin (middle) and composer, Steve Burke (right) are big fans of classic brawlers.

Tell us a little about the arrest mechanic in the game.

JH: The arrest mechanic was designed to give the player a bit of choice in how they play the game – beat everyone to a pulp, or play by the rules and be a good cop? If a thug is dizzy after getting up you can arrest him or her. This takes a little longer to carry out than a simple kick or punch so it can leave you vulnerable, but it will remove the baddie from the playfield, and it leaves you a health pickup. This creates quite interesting gameplay system as you have to take more of a risk to arrest someone, but the rewards are potentially greater.

Will you be targeting 60 frames per second for *Raging Justice*?

AM: We certainly are! Getting the feel just right as you play through *Raging Justice* was our ultimate goal. We want *Raging Justice* to play how you remember the classic brawlers playing as a gamer now, rather than how they actually played.

What will the game's vehicles add to the combat?

JH: We wanted to add anything to *Raging Justice* that we thought would be fun. From a gameplay point of view they give the player the chance to wreak havoc on the enemies and a temporary feeling of invincibility. It's really important to give the player a little respite and reward from time to time whether that is a sword or a shotgun or a broken bottle, or a petrol powered ride-on lawnmower!

What knowledge from your time working at Rare have you applied to *Raging Justice*?

NM: Oh, so much! Rare was my apprenticeship in the games industry! The main things that I would say I found helped mould *Raging Justice* into what it is was the appreciation of gameplay, character controls and how to focus on fun. Everything we added to *Raging Justice* had to have an element of fun, and if we couldn't find the fun we would remove it, even if we had spent months and months trying to get it right! I remember learning the mantra of 'keep it stupid simple', and have as minimum a route to the gameplay as possible.

» [PC] There are a variety of characters to play in *Raging Justice*, which should keep things interesting.

» [PC] There are also sorts of vehicles to use in *Raging Justice*, including tractors of all things.

BACK TO THE NOUGHTIES

MAY 2001 – X marks the spot as Microsoft's new console gets closer to launch, but Japanese players are happy to stick with the 2D delights of the GBA. Nick Thorpe points his time machine at Tokyo to find out more…

NEWS MAY 2001

Douglas Adams, author of *The Hitchhiker's Guide To The Galaxy* and *Dirk Gently's Holistic Detective Agency*, passed away on 11 May.
He had been resting from a regular gym workout when he suffered a heart attack. At the time of his death, Douglas had been trying to get a film adaptation of *The Hitchhiker's Guide To The Galaxy* made, as Disney had bought the rights in 1998. His funeral was held just five days later, and a memorial service was later held in September 2001.

On 19 May, Apple opened its flagship store in New York. Frustrated with the treatment of the brand in major computer stores, which generally favoured Windows machines, Steve Jobs had pushed for the computer company to take control of its retail presentation. Though viewed by some as a costly white elephant, the Apple Store proved its merits and is now a chain of over 500 stores worldwide.

Major riots broke out in Oldham on Saturday 26 May, and continued throughout the Sunday and Monday, leading to at least 20 injuries and 37 arrests. The ethnically-motivated violence was primarily caused by friction between local white and Asian communities, as local areas and schools had essentially become unofficially segregated. Ten people were jailed for nine months each.

[Xbox] If nothing else, *Dead Or Alive 3* showed that the Xbox was capable of astonishing graphical performance.

THE LATEST NEWS FROM MAY 2001

All eyes were on Tokyo this month for the Tokyo Game Show, where the battle lines for the next generation would be drawn – or so it seemed. But with the PlayStation 2 already on the market and Nintendo choosing to hold its own show instead, Microsoft's attempt to sell the Xbox to the Japanese audience was the big story. It's fair to say the company was taking the market seriously as it unveiled a redesigned controller that addressed the size problems of the domestic model, to be included by default with Japanese consoles. Tecmo's visually impressive *Dead Or Alive 3* was also shown off for the first time, and Sega confirmed its support for the machine with 11 games said to be in development including new *Jet Set Radio*, *Sega GT* and *Panzer Dragoon* games. Ultimately though, it appeared that Microsoft might struggle in the region – *Edge* noted that, "The software line-up seemed to leave Japanese gamers slightly cold."

Elsewhere at the show, Sony's presence was marked with the existing big games *Gran Turismo 3* and *Metal Gear Solid 2*, with the newly playable demos of *Silent Hill 2* and *Final Fantasy X* ensuring that trade show veterans had something new to talk about. Game Boy Advance games were popular, particularly Capcom's retro offerings *Super Street Fighter II X Revival* and *Final Fight One*. The WonderSwan looked hard-pressed to compete, although Square's *Final Fantasy* conversions did ensure that the machine remained attractive – more than can be said for the Neo-Geo Pocket Color, which by this point was represented by one SNK employee and a Pachislot game. Sega's Dreamcast also limped on, supported chiefly by Capcom games including *Capcom Vs SNK: Millennium Fight 2000 Pro* and *Eldorado Gate*.

Microsoft had a better time at its own Gamestock event, where it unveiled its first-party Xbox games. The star of the show was *Halo*, a first-

[Game Boy Color] Back in Blighty, kids were thrilled to finally get *Pokémon*'s long-awaited sequel.

[Xbox] A suited-up space marine leaps over a couple of enemies in a vehicle. Could *Halo* deliver such fun?

THIS MONTH IN...

N64

Concerned reader Ian Kirk wants to know, "Have other readers noticed the lack of choice in their local stores?" Apparently, he had no reason to worry. "The N64 is the great survivor – and there are heaps of great new games to come," wrote *N64*. Five months later, the magazine rebranded as *NGC*.

Edge

The winners of the magazine's annual awards are revealed, and Sega sweeps up. As well as winning best publisher, Sonic Team wins best developer, *Phantasy Star Online* wins game of the year, and *Jet Set Radio* wins graphical achievement. Other winners include *Deus Ex*, *Mr Driller 2* and *Alien Resurrection*.

Play

"It's been reported in the Japanese press that erstwhile Japanese softco SNK has sadly been forced to file for bankruptcy," reports *Play*. Say it ain't so? It ain't so – but the magazine was only jumping the gun a little. SNK did file for bankruptcy in 2001, just a few months later.

[Game Boy Advance] There wasn't much new to see, but *Super Mario Advance* still sold by the bucketload.

[N64] The return of Banjo and Kazooie marked something of a last hurrah for Nintendo's aging platform.

person shooter which had previously been destined for the PC. With the controls successfully reworked for a pad and a promising level design, but no sign of multiplayer, *Edge* noted, "If the finished game can implement a structure that does justice to the gameplay, Microsoft will have a hit on its hands." Other games on show included *Amped: Freestyle Snowboarding* ("perhaps the best indication at this stage of the graphical potential of the Xbox's custom graphics chip"), *Project Gotham Racing*, *NFL Fever*, *Oddworld: Munch's Oddysee*, *Fuzion Frenzy* and *Azurik*.

The Japanese launch of the Game Boy Advance went rather splendidly, with over half a million units sold in just four days. *Edge* considered *Mr Driller 2* to be the standout launch release, giving it 8/10 and commenting that the game "feels as though it has found its natural home". Many of the other games were considered to be good but unadventurous, with *Super Mario Advance*, *F-Zero*, *Castlevania* all scoring 7/10, and *Kuru Kuru Kururin* scored the same for being inventive but occasionally frustrating. The slightly-less impressive games on offer were *Konami Wai Wai Racing* (6/10), *Pinobee: Quest Of Heart* (5/10) and *Top Gear: All Japan* (4/10).

Back at home, the mid-year release slump was beginning to take hold. On the PlayStation, *The Simpsons*

Wrestling divided critics and the public – the game scored 25% in *Play* and 4/10 in the *Official PlayStation Magazine*, but went straight to the top of the charts. Tank simulator *Panzer Front* scored 9/10 in *OPM*, 7/10 in *Edge* and 73% in *Play*. PlayStation 2 owners were treated to *Ring Of Red*, a turn-based strategy game set in an alternative history where Japan divided into pro-Soviet and pro-American factions after World War II. The game scored 8/10 in *Edge*, which called it, "an unexpected delight".

The game of the month for Dreamcast owners was *Skies Of Arcadia* (8/10, *Official Dreamcast Magazine*), an RPG following a band of sky pirates trying to prevent an empire from acquiring weapons with the potential to destroy the world. *Daytona USA 2001* was also well received (7/10, *Official Dreamcast Magazine*), but criticised for a lack of content and the absence of the online mode found in the NTSC versions. N64 players got Rare's long-awaited platform sequel *Banjo-Tooie*, which scored 81% in *N64 Magazine*. Reviewer Mark Green felt that although the game was good, it

[Dreamcast] Sega fans were still getting a steady stream of quality games like *Skies Of Arcadia*.

"doesn't have much more to offer than *Donkey Kong 64*".

So the biggest release of the month was reserved for the humble Game Boy, which played host to the hotly anticipated *Pokémon Gold & Silver*. The sequel packed in 100 brand-new monsters, bringing the total to 251, and featured a new region to explore with new gym leaders. *N64*'s Planet Game Boy section gave the game a generous six-page review and the full 5/5 score, with the following encouragement: "Even if you've avoided all things *Pokémon* 'til now, swallow your pride and give *Gold/Silver* a go." ✱

CHARTS

MAY 2001

DREAMCAST

1 Phantasy Star Online (Sega)
2 Sonic Adventure (Sega)
3 Toy Racer (Sega)
4 Fighting Force 2 (Eidos)
5 Vanishing Point (Acclaim)

PLAYSTATION

1 The Simpsons Wrestling (EA)
2 ISS Pro Evolution 2 (Konami)
3 LMA Manager 2001 (Codemasters)
4 Final Fantasy IX (SCEE)
5 Who Wants To Be A Millionaire? (Eidos)

GAME BOY ADVANCE (JAPAN)

1 Super Mario Advance (Nintendo)
2 F-Zero For Game Boy Advance (Nintendo)
3 Power Pro-Kun Pocket 3 (Konami)
4 Yu-Gi-Oh: Dungeon Dice Monsters (Konami)
5 Battle Network Rockman EXE (Capcom)

MUSIC

1 Don't Stop Movin' (S Club 7)
2 It's Raining Men (Geri Halliwell)
3 Ride Wit Me (Nelly Feat City Spud)
4 Cold As Ice (MOP)
5 You Are Alive (Fragma)
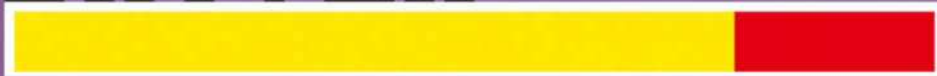
Cadillacs And Dinosaurs

» **ARCADE** » **CAPCOM** » **1993**

I'm amazed that I missed *Xenozoic Tales* when it was first released. Later rebranded as *Cadillacs And Dinosaurs*, the popular comic went on to receive an animated series, numerous action figures and even its very own role-playing game.

I never experienced any of the above, but I did stumble across the arcade game in my local arcade during the mid-Nineties. For those who have never played it, it's a highly entertaining scrolling brawler that's powered by Capcom's dynamic CP System Dash+ arcade board. As a result *Cadillacs And Dinosaurs* looks the business with gigantic, beautifully animated sprites and a style that's very similar to the animated TV series, which I've now tracked down and watched.

One of the things that immediately stood out to me at the time of the game's release was the inclusion of various guns you could pick up and use, which ranged from Uzis to rocket launchers. You'd think the inclusion of guns would make Capcom's game incredibly easy, but that couldn't be further from the truth. While it does indeed allow you to keep enemies at range, you are often up against numerous bad guys, meaning it is easy to get overpowered. Ammo is limited, too, which balances things out further.

There are of course dinosaurs in Capcom's game and they can cause you all sorts of issues (and turn red to show they're dangerous). Fortunately, you can beat them into submission, even the tyrannosaurus, which causes them to slink off-screen. Dinosaurs also occasionally work as hazards to be avoided, with one stage featuring a gigantic foot that needs to be continually dodged as you fight your way through a dank swamp. Interestingly, most of the end of level bosses are simply deranged humans with names like The Butcher and Slice rather than actual dinos, which is probably a good thing considering how tough some of the oversized reptiles are.

My favourite part of Capcom's game doesn't feature dinosaurs at all, though. Instead it's a rare opportunity to get in your Cadillac and simply run enemies over as you race across a desert. It's particularly mean-spirited as the men you encounter are casually sitting around, no doubt expecting you to turn up on foot, which makes mowing them down even funnier. It is funny, right? ✱

STREET FIGHTER

BLOW BY BLOW

SINCE 1987, CAPCOM HAS DELIVERED BONE-CRUNCHING BLOWS AND SPECTACULAR SPECIAL MOVES TO THE DELIGHT OF GAMERS WORLDWIDE. RETRO GAMER SPEAKS TO THE SERIES' DEVELOPERS TO BREAK DOWN EXACTLY WHAT GOES INTO MAKING THE GAMES GREAT…

Words by Nick Thorpe

For over 30 years, *Street Fighter* has been at the pinnacle of the fighting game genre. Like a crafty veteran prize fighter, Capcom has managed to not only keep up with its competition, but outfox it along the way. Rivalries with the likes of *Mortal Kombat* and *The King Of Fighters* couldn't halt the rise of *Street Fighter,* and nor could the rise of the three-dimensional fighting game. Even the changing fortunes of the fighting game genre as a whole haven't been able to floor this series.

The first game was a critical success that did good business in the arcades, but it's seen as little more than a historical curio today. That's because *Street Fighter II* redefined the genre in 1991, setting the standard for 2D fighting games for decades to come and kicking off a craze that revitalised the arcade market. Via *Street Fighter*, Capcom stood atop the 2D fighting pile for the remainder of the Nineties with the popular *Street Fighter Alpha* series and hardcore-friendly *Street Fighter III* series. Then in 2008, *Street Fighter IV* revived the series and ushered in a fighting game renaissance, drawing mainstream attention back to the genre. *Street Fighter V* attracted record-breaking numbers of competitors to the prestigious Evolution Championship Series fighting game tournament in 2016.

Over the years, *Street Fighter* has busted out of the arcades and into the modern esports scene, and has transcended videogames to become a part of broader pop culture. There aren't many games that would be instantly recognisable when referenced in a Jackie Chan film or an episode of *Family Guy,* but *Street Fighter* shout-outs made it into those and more besides. The series has inspired comics, animated movies, card games and even a major Hollywood film starring Jean Claude Van Damme, Ming-Na Wen and Raul Julia.

Of course, what goes into the creation of a good *Street Fighter* game hasn't changed much over the years. All of the games share a common framework of important aspects, counting everything from the fighting itself to flavour additions such as stage design and music, and the competitive scene which has a symbiotic relationship with the games. We've spoken to Capcom's developers to break down exactly what makes a great *Street Fighter* game, and what goes into those distinctive areas to create a cohesive whole.

BUILDING THE BRUISERS

CHARACTER DESIGN | FIGHT!

YOSHINORI ONO AND TAKAYUKI NAKAYAMA DISCUSS THE FINER POINTS OF CHARACTER DESIGN

Every *Street Fighter* player has a preferred strategy – and in the game, those strategies are represented by their characters. As a result, character design is of utmost importance to the series. Whether you want to get in close and deal lots of damage, play keep-away and punish mistakes, or even play a deliberately weak character as a handicap, Capcom provides a character with the attributes and move set to let you play *your* game. So with decades of hindsight, it's strange to think that the original *Street Fighter* game's characters represented obstacles to overcome. To do that, you had a generic martial artist with a single skillset: Ryu. This need to combat fighters of all types ultimately ended up informing the character's abilities. "In terms of gameplay, he's a great all-rounder and easy to use," says Yoshinori Ono, a series veteran and the executive producer of *Street Fighter V.*

In *Street Fighter II*, the number of playable characters was increased to eight. This meant that for the first time, the developers had to design a multitude of characters to play both with and against, and could explore the aforementioned offensive and defensive extremes. We've often wondered what the starting point is, so we call *Street Fighter V* chief director Takayuki Nakayama into the ring; do the designers come up with character designs to fit certain fighting styles, or design cool-looking people and then decide how they'll fight? "Both of those approaches have been used but we actually mostly come up with them at the same time," he explains. "We think about what kinds of moves would be fun at the same time as we're thinking about what kind of design would best show off their moves."

» [Arcade] The original *Street Fighter* may not raise eyebrows today, but it lay the groundwork for the rest of the series.

» The ever-animated Yoshinori Ono is a series veteran, and directed *Street Fighter V.*

Character design has always been a difficult process, with many ideas trialled and dropped along the way – rejected *Street Fighter II* designs include a bullfighter and an American amateur wrestler. According to Nakayama, it remains difficult to nail down. "We go through at least 100 versions when we are designing a brand-new character, going through many iterations of their appearance, storyline and moves," he explains. Such a process must surely take a long time? "It obviously depends on the specific character but I'd say, broadly, it takes five people three months to design one character," he confirms. "And then it's a further six months to finalise their moves and animations."

Something that has always been a part of *Street Fighter* is its international flavour – the

FIGHTERS' EVOLUTION

STREET FIGHTER

STREET FIGHTER II

STREET FIGHTER ALPHA

STREET FIGHTER III

STREET FIGHTER IV

STREET FIGHTER V

» [Arcade] Zangief may be a grappler by design, but other characters can throw, too.

» [Arcade] (Above) Charlie and Guile are both military men and fight similarly.

» [Arcade] (left) Just by looking at Alex, you can tell he's a heavy-hitter.

» [PC] (below-left) Poison has come a long way from her debut as a regular enemy in *Final Fight*.

original game featured fighters from the USA, Japan, China and the UK. "The fact that the original *Street Fighter II* had *The World Warrior* as its subtitle tells you that fighters from around the globe coming together to compete is not just a natural part of *Street Fighter* but an essential part," says Ono. "I think that it also lets players feel more connected to the game when they see a character from their part of the world in it, and maybe it's a hook for them to get into the game in the first place."

However, new characters are only one part of the story. While *Street Fighter*'s cast and the bulk of the characters in *Street Fighter II* and *Street Fighter III* had to be designed from scratch, the *Street Fighter Alpha* series provided a mixture of new and returning characters that has become the model for new instalments to the series going forward. How does the team go about bringing these older characters back after long absences? "The first step is researching how the character was played in the games they previously appeared in. We play those games and watch videos, and even reread the old design documents to work out what the original intent behind the character was," says Nakayama. "Combined with our estimation of what players want from the character and how they like to play as them, we recreate them and then work

on eliminating the aspects that aren't in line with our vision."

For Ono, it's hard to pick a favourite. "Hmm… I get asked this a lot. The characters are like my children – I don't like to engage in favouritism," he hesitates. "I love R Mika a lot, and used my position at Capcom to bring her back in *Street Fighter V*," he explains with a chuckle. "But then again, I joined the company in the *Street Fighter II* era and worked on the sound team, I do have a special place in my heart for Cammy, since she was part of my work back then." But what of the Blanka toy that Ono is often seen with? "Well, he's been my travel buddy around the world for over ten years now, so he's beyond the level of like or dislike."

But despite all of the new characters over the years, none has displaced Ryu as the face of the series. "I think it's his personality that makes him resonate so much," says Ono. "He doesn't stand out, he values effort, he's a man of few words, he's kind of mysterious, and there's no one who you could say he's similar to. I think that's what has kept him popular over the long history of the series." It doesn't take much to convey that either, as occasional post-match win quotes will suffice. "He also has the 'Perfect Attendance Award' for the series and that is something that I think shows his dedication," Ono laughs.

STREET FIGHTER V

STREET FIGHTER IV

STREET FIGHTER III

STREET FIGHTER ALPHA

STREET FIGHTER II

STREET FIGHTER

ARENAS OF AGGRESSION

MAKING THE STAGES

EVERY GREAT FIGHT SCENE NEEDS GREAT FIGHT SCENERY

The very name of the *Street Fighter* series suggests a location for the brawls it hosts – not within the confines of gyms and stadia, but out in the open. It has always delivered on that promise, too, from subways to sidewalks to more exotic locations, like volcanoes.

At first blush, it might seem that stage design is a relatively unimportant aspect of the *Street Fighter* series. It's certainly true that the series has been conservative in its approach to stage design – as others have experimented with new mechanics, *Street Fighter* has stuck with a flat floor and a wall at each end. But it's the sense of character and polish provided by these stages that makes them so crucial, as you remember the little things about each stage. When you throw someone through the crates in Guile's *Street Fighter II* stage, there's a real sense of impact. When Seth's stage starts to fall apart in *Street Fighter IV*, you know that you're reaching the climax of the game. Without the expertise of the stage designers, playing *Street Fighter* would be a rather flat experience – so let's find out how they're made from *Street Fighter V*'s art director, Toshiyuki Kamei.

What do you do to ensure each level represents the character fighting on it?
I try to bring in elements like the character's nationality and colour scheme. When choosing the setting of the stage, I look at scenes and buildings typical of the country they come from, and then build more detail in with designs and props that bring out the character's personality. Colour is a really important factor, so I'll choose a colour that goes well with the character and then work on the lighting. I try to make sure each new stage fits in with the image players have for the games, while also bringing something fresh and new.

Is any real-world location scouting done when designing levels?
We haven't done anything like that recently. I would jump at the chance to go, though!

How long does a typical level take to create?
From the initial idea to creating prop assets, background characters and so on, it's about three months, then lighting and optimisation takes another month until it's complete. Some stages take longer than others – the China stages tend to have lots and lots of small details, for example.

There's lots of Easter eggs in the background of the levels, is that a labour of love from the team?
The team are all huge fans, so they love to put all kinds of little details in for fans to enjoy spotting.

Vega has his own stage-specific attack in some games, the wall climb. Have you ever considered adding more stage-specific attacks to *Street Fighter*?
We have considered that and it can be fun in single-player, but we also don't want to put in moves that only the CPU can pull off as it means players will want to do it in versus mode as well.

» [PC] The jungle stage in *SFIV* is teeming with flora and fauna, and the fighters trade blows on a precarious wooden bridge, upping the ante.

Over the years, other fighting games have adopted ring-out systems, uneven arenas, and other stage design features. Why has *Street Fighter* not done so?
I think verticality, ring-outs, weapons and other rules are fun and would be cool to try out, but they would have to be in a bonus mode. *Street Fighter* has become an esport in its own right, and introducing these kinds of 'uncertainties' to the rules would probably not go down well.

What version of *Street Fighter* has the best levels and why?
I think each title has done well at making the stages part of its coherent vision and playstyle. I always get a sense of excitement from the background characters watching the fight, and a feeling of the atmosphere of each country.

GET BONUS! THE LEVELS OF STREET FIGHTER AREN'T JUST FOR FIGHTING IN...

TILE BREAKING
STREET FIGHTER
■ If it's not enough that you've had to face several gruelling rounds of opponents, you're now expected to perform in front of an idiot crowd who are just waiting for you to karate chop your way through nine rock-hard tiles. Timing is everything, so be sure to get it right; otherwise Ryu will hurt both his hand and his pride. It's repeated later in the game, but with thicker concrete blocks.

WOOD BREAKING
STREET FIGHTER
■ Ryu's trials and tribulations continue with a room containing three burly men and three planks of wood. There's no hazing going on here, though, just a dazzling display of strength and skill as you've got to break the pieces of wood the three men are holding with your fists or feet. It pops up again later in the game, but now there's a fourth plank holder to deal with.

WRECK THE CAR
STREET FIGHTER II
■ *Final Fight* taught us that smashing the crap out of someone else's car makes for an entertaining bonus game. Capcom brought it back for *Street Fighter II*, but left the weapons back in Metro City so your character will simply have to rely on their limbs instead. The stage has popped up in later games to allow later generations to enjoy some car carnage.

SETTING A SCENE

WHAT GOES INTO A CLASSIC STREET FIGHTER BACKGROUND? WE BREAK IT DOWN USING DHALSIM'S STAGE FROM ALPHA 3

LOCAL SCENERY

This is India, Dhalsim's homeland, and the backdrop needs to convey that. Good design means that you're not easily going to mistake the architecture in this scene for that of Rome or Chicago.

WILDLIFE

Animals are often used to add local flavour, such as the elephants here – they're a common feature of Dhalsim's stages. The dogs aren't quite so common, but they're cute so they get a pass.

THROWBACKS

The *Street Fighter* crew loves to reference the series' wider mythology. When Dhalsim fights here, his wife Sarah (introduced in his *Super Street Fighter II* ending) appears as a spectator to cheer him on.

SPECTATORS

The kind of crowd present at a fight can tell you a lot about a fighter. Flashy fame hunters like Ken can draw big crowds. Dhalsim, who doesn't care for the attention, has a single yogi.

BARREL BUSTER
STREET FIGHTER II

■ This bonus stage requires you to smash 20 barrels. It sounds easy, and would be if they just sat there like barrels normally do. These one have a purpose, though, and that's to bugger up your chance to score big points by bouncing erratically from a conveyer belt and hopefully knocking you down in the process. Despite how annoying it is, it's still popped up in later games.

OIL DRUMS
STREET FIGHTER II

■ Sometimes people just ask for trouble and the person who stacked these carefully placed oil drums clearly wanted them to be knocked down, right? Careful though, as these particular drums occasionally set alight, burning anyone who hits them in the process. Capcom revisited the idea with less flames and additional bricks for its home conversions to the SNES and Mega Drive.

BASKETBALL
STREET FIGHTER III

■ This smart stage is designed to show off the game's new parry system and it's thematically cool to look at as well. Shaun will lob an increasing number of basketballs towards you at different speeds and heights and you must simply attempt to parry/deflect as many of them as possible. Careful, though, as he's a bit of a swine and likes to catch you out with low blows.

THE SWEET SCIENCE

FIGHTING MECHANICS

EXPLAINING THE MECHANICS THAT SWAY THE OUTCOME OF EVERY BOUT

If you've ever wondered why some people passionately prefer *Street Fighter Alpha 3* to its predecessor, or why players of *Street Fighter III: 3rd Strike* didn't necessarily get on well with *Street Fighter IV* to start with, it's usually because of the fighting mechanics. As a basic example, consider throw attacks. Introduced in *Street Fighter II*, they allowed a player to inflict a damaging attack on blocking player – thus reducing the viability of defending your way to a time out victory. But from *Street Fighter III* onwards it's possible to 'tech' throws, reducing damage or even cancelling the throw entirely with an appropriately timed input – thus limiting the usefulness of such moves.

» [Arcade] Parrying became a defining trait of the *Street Fighter III* series of games.

By tweaking the abilities and options available to players in this way, Capcom can dramatically change the way games feel. "It changes a lot just because it makes the meta different," explains Justin Wong, a professional fighting game player. "If there was parry, you have to think twice in using long-range normals, if there is focus attack you have to think about how to break the opponent's focus attack since it can absorb one hit. Each different game mechanic changes the meta and also changes the tier list as well."

Of course, *Street Fighter II*'s defining mechanic famously originated as an unintended side effect of another system. The ability to cancel the animation of a normal attack into a special move, creating a combo, was accidentally added when the developers were making special moves easier to pull off but was considered interesting enough to include in the final game. Landing combos has become key to maximising your offensive opportunities over the years, and those simple origins are far behind us. "*Street Fighter*'s combo system evolved a lot," says Justin. "Back in the day there was no combo count but now there is, so people can see what is a combo and what is not a combo. It also changed a lot with juggles, using the game mechanics to extend combos to make them longer."

Street Fighter Alpha introduced a mixture of mechanics that enhanced both offensive and defensive options. The one that symbolises this balance most effectively is the air guard – although it's an extra blocking option, it's one that makes aggressive moves like jumping towards the opponent much safer. Likewise, the

» [Arcade] Sagat punishes Ken for a mistimed aerial attack with a devastating uppercut.

Alpha Counter allowed players to turn defence into attack, burning one segment of your super meter to hit an opponent in response to a blocked attack. Escape rolls also ensured that your opponent couldn't always predict where you'd be standing when you got up from being knocked down. *Street Fighter Alpha 2* added the devastating Custom Combo, a DIY super move that could inflict huge damage, and *Street Fighter Alpha 3* allowed you to use Guard Crush to punish players that blocked too much.

Street Fighter III: The New Generation added a variety of new movement options that significantly increased the scope for aggressive play. For the first time, a double tap of the joystick forwards or backwards allowed the player to dash in the appropriate direction, closing distance quickly. By flicking the stick downwards prior to jumping, you can perform a super jump, covering additional distance. Hitting

MECHANIC'S MANUAL
WHICH GAME INTRODUCED YOUR FAVOURITE MECHANIC?

STREET FIGHTER
- **Special moves** (PICTURED)
- **Light, medium and heavy attacks**

STREET FIGHTER II SERIES
- **Throws**
- **Combos**
- **Stun** (PICTURED)
- **Super moves** (*from Super Street Fighter II Turbo*)

STREET FIGHTER ALPHA SERIES
- **Taunt**
- **Air guard**
- **Alpha Counter** (PICTURED)
- **Custom combo** (*from Street Fighter Alpha 2*)
- Escape roll
- **Air recovery** (*from Street Fighter Alpha 3*)
- **Guard crush** (*from Street Fighter Alpha 3*)

» [Arcade] Use a mix of high, mid and low attacks to keep your opponent guessing.

down when knocked down would also cause a quick stand, throwing off your opponent's attack timing and allowing you to get straight back into the fray. And then there's the parry – a curiously aggressive defensive move. By pushing the stick towards the opponent in time with their strike, you can nullify damage and recover before them to launch your own attack. *2nd Impact* introduced EX moves, powerful variants of certain regular special moves that cost super meter to use.

If all that aggression rubbed you up the wrong way, the *Street Fighter IV* series was probably more to your taste. The Focus Attack was a powerful new ability that allowed players to absorb an attack and deliver a devastating strike in response – one which would induce the new 'crumple' state, in which the enemy is falling but still vulnerable to attack. The Ultra Combo was also introduced – a secondary super gauge which charged only upon receiving damage, allowing for some extraordinary comebacks. The pendulum has swung back, with *Street Fighter V* adding V Triggers and V Skills, character-specific abilities that skew towards aggressive play, as well as Crush Counters that allow players to carry on combos after countering a weaker attack with a strong attack. However, defensive characters aren't as disadvantaged in competition as players initially believed, and that's the beauty of *Street Fighter*'s mechanical depth – it can take years to fully work out what's going on and how best to work within a given game's rules.

FIGHTING TALK
BRAWLER TERMINOLOGY EXPLAINED

ARMOUR
Usually if you manage to successfully land a hit on an opponent when they're mid-attack, their attack animation stops. Moves with 'armour' won't break that animation when hit.

BAITING
The act of trying to get your opponent to attack you so you can punish them.

CANCEL
Breaking out of your character's current animation with another move or ability – good for extending combos.

CROSS-UP
A tricksy move that makes it difficult for your opponent to decide whether to guard their left or right side.

FOOTSIES
Typically a part in a match where players are poking one another with long-range ground moves, usually kicks.

FRAME DATA
The numbers behind an attack animation. Each move has frames for its startup, hit and recovery animations.

HIT CONFIRM
To launch string of attacks to break through an opponent's block, then moving straight into a combo.

» [Arcade] A game of footsies is taking place here, with both Ken and Alex trying to hit each other's foot. The fools.

INFINITE
A combo that can go on indefinitely, much to the dismay of your opponent if you land one.

JUGGLE
The act of launching your opponent into the air, then hitting them to keep them airborne.

MIX-UP
A combo or string of low, medium and high attacks that are unpredictable.

PUNISH
To take advantage of an opening in an enemy attack's recovery animation.

WHIFF
To completely miss your attack. Sometimes used intentionally to bait your opponent.

ZONING
Controlling the battlefield at mid-to-long range using projectiles and out-prioritising your foe's own attacks.

Bold indicates evergreen mechanics – ones kept through subsequent games

STREET FIGHTER III SERIES
- **Dash**
- **Quick stand**
- Super jump
- Parry **(PICTURED)**
- **EX moves** *(from Street Fighter III: 2nd Impact)*

STREET FIGHTER IV SERIES
- **Crumple**
- Focus attack **(PICTURED)**
- Ultra combo
- Delayed standing *(from Ultra Street Fighter IV)*

STREET FIGHTER V
- V Trigger **(PICTURED)**
- V Skill
- Crush Counter

SOMETHING SPECIAL

SPECIAL MOVES

WHY STREET FIGHTER CAN'T DO WITHOUT THE SPINNING BIRD KICK, PSYCHO CRUSHER AND TIGER UPPERCUT

There are many things that go into making your favourite *Street Fighter* character play in their own unique fashion, but arguably the most important is special moves. Don't take that from us, though – take it from multiple time Evolution championship winner Justin Wong. "Special moves are always important throughout the years because they are what makes the character who he/she is," says Justin. "Ryu would not be Ryu without the Hadoken and seeing the evolution of it being better/worse has always been a treat."

As compared to normal attacks, special moves are a little more difficult to perform in that they require a combination of joystick movements and button presses. The trade-off is that these attacks typically have properties that aren't found in other moves. Some might hit multiple times or send you to the other side of the screen in the blink of an eye. Others launch projectiles, others still nullify and repel those projectiles. In any case, they have a huge impact on the way you play.

» [Arcade] More adventurous combat styles were refined for the later sequels.

» [Arcade] Chun-Li's projectile attack is slightly different to Ryu and Ken's.

When creating special moves for characters, three key considerations are taken into account: "Individuality, coolness, and accessibility," according to *Street Fighter V*'s chief director Takayuki Nakayama. But one thing that Capcom tries to steer away from is introducing more powerful moves in exchange for more difficult inputs. "We try not to have any moves that are really hard to pull off. The strength and difficulty of a move should not be in its input command but in the strategy of deciding when to use it – the timing and the frames, and how to work out the risks and rewards," Nakayama explains. Does the team ever come up with moves that end up suiting another character better? "Not often, but it has happened," confirms Nakayama. "We also sometimes reuse ideas that were cut from games that didn't come out."

Between games, a set of special moves is what keeps a character familiar. If you know how

LARGER THAN LIFE REAL-LIFE FIGHTING STYLES FEATURED IN STREET FIGHTER

KICKBOXING
USED BY: ALEX (WITH WRESTLING), DEE JAY, ED (WITH BOXING)
■ Developed from a multitude of different martial arts including Karate, Muay Thai and boxing. Contrary to its name, the fighting style incorporates strikes from both legs and arms.

WRESTLING
USED BY: HAGGAR, ZANGIEF, E HONDA, HAKAN, EL FUERTE, ALEX, POISON, R. MIKA, BIRDIE, DARUN MISTER, ABEL
■ This style typically consists of wearing down the opponent with numerous throws, joint locks, takedowns and grappling.

BOXING
USED BY: BALROG, CRACKER JACK, DUDLEY, ED (WITH KICKBOXING)
■ An ancient sport, combatants use their fists to land blows and must keep their strikes above waist height. There are numerous styles and stances on offer across the series.

SHOTOKAN
USED BY: RYU, KEN, AKUMA, GOUKEN
■ Developed by Gichin Funakoshi, the Shotokan style is generally considered one of the most influential styles of karate. Interestingly, the real-life version is nothing like that used by the characters in the game.
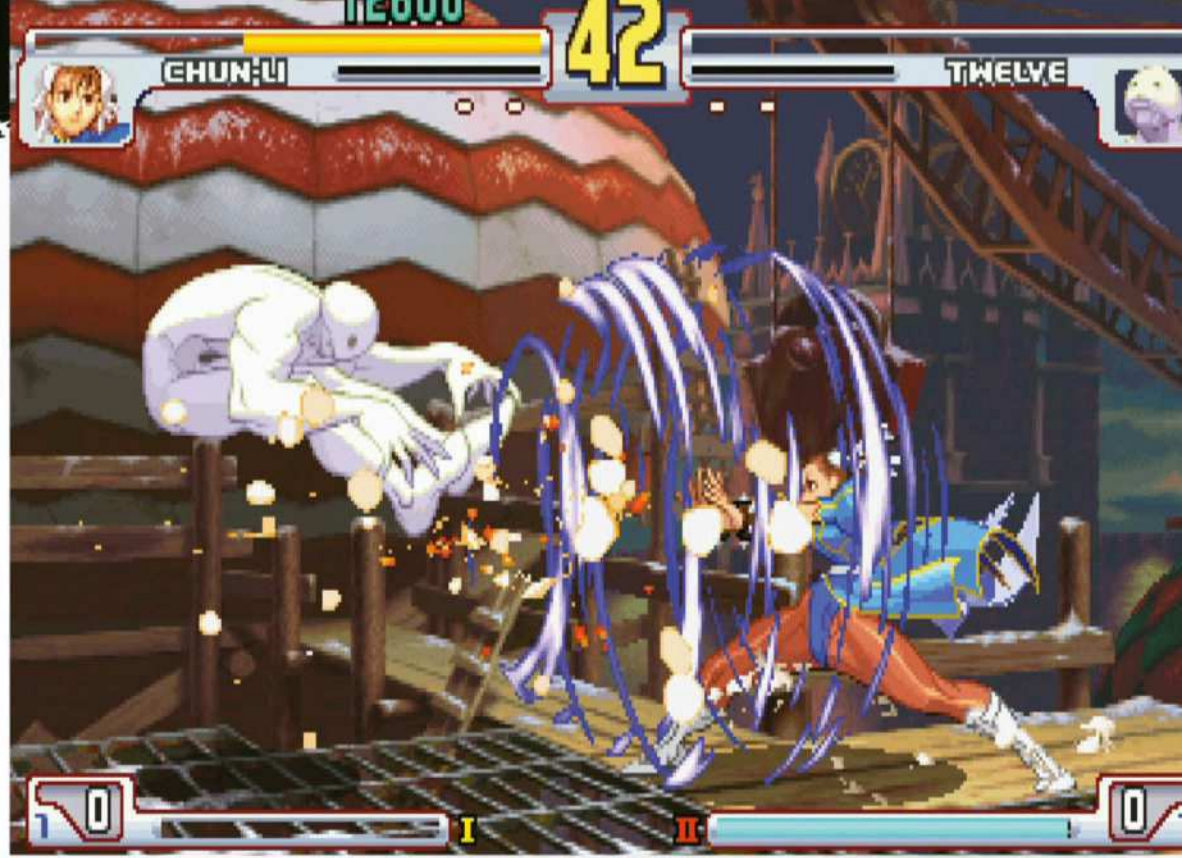
» [PC] Poison goes in for the nut shot on Ken with her Ultra Combo– let's face it, he probably had it coming.

» [PS4] Laura's special moves are a mix between grapples and strikes, which fits in with her jiu-jitsu fighting style.

to pull off a character's moves in an older game, the chances are high that you'd be able to jump straight back into playing with them in *Street Fighter IV* or *Street Fighter V*. Of course, there are exceptions – Chun-Li, for example, has had her Kikoken fireball changed from a charge motion (holding back, then forward) to a half-circular motion and back again. "I feel that the reception has been positive," says Nakayama when asked about such changes. "We only make changes in order to bring the inputs in line with the character's fighting style, or when two moves have similar inputs which can cause players to do the wrong move at critical moments."

One function that special moves perform particularly well is differentiating characters that are otherwise quite similar, such as the trio of Ryu, Ken and Akuma. "Each character has to have their own concept defined. Ryu has weight in each attack, and is very defensive. Ken is better at combo attacks and has a certain flashiness, so when he starts attacking he keeps going. And Akuma has the best parts of both but takes more technical mastery to use well," Nakayama explains. "Based on these concepts, we separate out the abilities of their moves. Ken is a character where you want to rush your opponent, so he has lots of hits, and his fists brush up against the ground so friction causes them to go on fire – that kind of thinking is how we distinguish each character."

The natural culmination of the special move has been the rise of the Super and Ultra attacks. When introduced in *Super Street Fighter II Turbo*, Super moves were just more powerful variants of special moves. But in recent years, the gameplay function has remained the same while the graphical presentation has turned them into miniature cinematic attack sequences, with dynamic camera angles and detailed facial expressions making them into much more of a spectacle. "This trend started in *Street Fighter III* and was firmly established in *Street Fighter IV*," says Nakayama. "I think they simply came from wanting to show powered-up versions of special moves in really creative and cinematic ways." Land a couple of Supers and you'll agree that they combine flash and function into something incredibly satisfying.

MUAY THAI
USED BY: **SAGAT, DAN HIBIKI, ADON, SAWADA**

■ Originating in Thailand, this style utilises a number of powerful strikes and clinching techniques and sees the fighter using a variety of devastating kick, elbow, knee and punch attacks.

NINJUTSU
USED BY: **VEGA, GUY, MAKI, IBUKI, ZEKU**

■ Okay, this is cheating slightly, as *Street Fighter* features a fictional version of ninjutsu called bushinryu. Proper ninjutsu was allegedly practised by shinobi and typically deals with fast strikes and numerous weapons.

KUNG FU
USED BY: **FEI LONG**

■ Rather than actual kung fu, *Street Fighter* instead features its own stylised version called Hitenryu, which is loosely based on Bruce Lee's Jeet Kune Do. Needless to say, it's practised in the game by Bruce Lee lookalike, Fei Long.

CAPOEIRA
USED BY: **ELENA**

■ This fusion of music, dance and acrobatics in one of the most spectacular forms of martial arts, and has its origins in Brazil and Africa. It focuses on speed and power and spins and it primarily uses kicks.

STREET FIGHTER

GET THE BLOOD PUMPING

FROM BRUISING BEATS TO SPIRITED SOUND EFFECTS, STREET FIGHTER'S AUDIO DELIVERS CHARACTER AND FIGHT FEEDBACK

From the second you hear the opening chord of Ken's theme in *Street Fighter II*, your hand grips the joystick tighter and your heart pulses, because you are in for a *fight*. As you twist the stick and hit punch, a scratchy cry of "Yoga fire!" alerts you to a successfully performed special move, and a "fwoosh" signals that your opponent has been engulfed in flames as planned. That's the goal of audio design in *Street Fighter* – to pump you up, to keep you informed, and to convey the cracking of bones as fist meets flesh.

Many of the classic *Street Fighter* tunes originated from *Street Fighter II*. It's hard to believe that the game shared similar sound hardware with its predecessor – the largely forgettable tunes of the first game emanated from a YM2151 FM synthesis chip and two MSM5205 ADPCM chips, while the sequel gained an MSM6295 ADPCM chip to replace the twin chips of the older board. The composing team of Yoko Shimomura, Isao Abe and Syun Nishigaki did maintain

» [Arcade] Many iconic characters were introduced in *Street Fighter II*, and many recognisable themes with them.
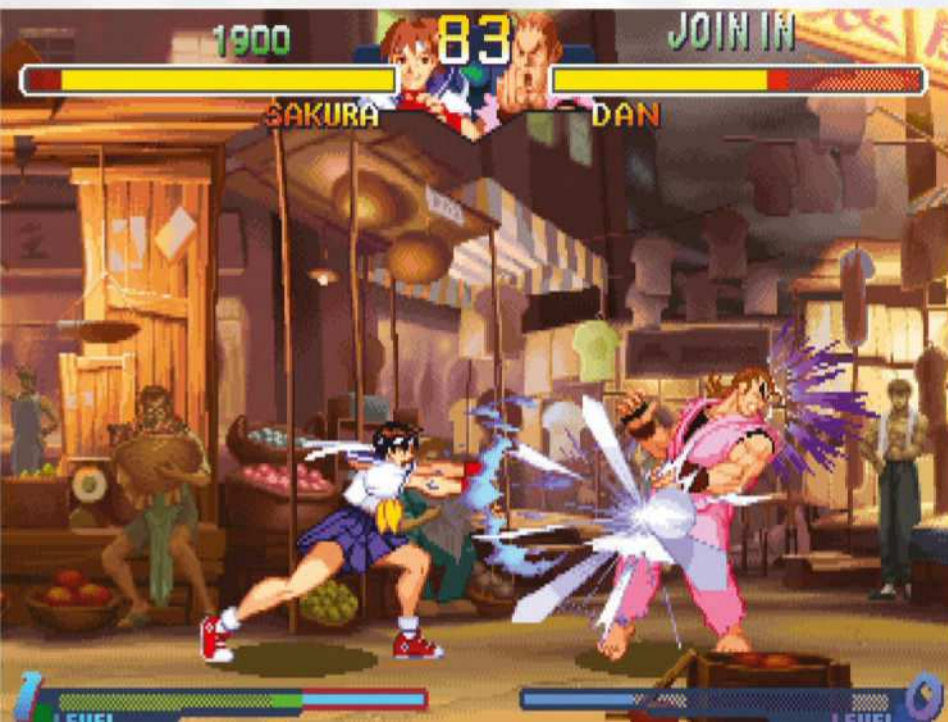

a tradition from the first game, in that the music was appropriately themed to the location it represented. However, their skill and programming advances ensured that the hardware sang in a way quite unlike what had gone before. The audio design also retained the best aspect of the first game, vocal sound effects for moves that conveyed character personality and showed intensity. When *Super Street Fighter II* arrived, taking advantage of the new CPS2 arcade board, the music was upgraded to take advantage of the new DL-1425 QSound chip. This meant reinvented arrangements of familiar themes, alongside new ones for the additional characters – and this would become the model for creating *Street Fighter* game music moving forward. *Street Fighter Alpha* took the same approach, retaining *Street Fighter II*'s classic themes and adding new ones for its new and returning characters, and *Street Fighter Alpha 2* did likewise.

Towards the end of the Nineties, *Street Fighter* games became more experimental in their approach to music. The *Street Fighter III* series let the old themes go, and lead composer Hideki Okugawa instead used the CPS3's sound chip to deliver sample-based tracks in a healthy mixture of musical styles, from house and rap to jazz. Back on the CPS2, *Street Fighter Alpha 3* also ditched all of the established character themes entirely, and went with an almost industrial sound – an energetic electronic soundtrack filled with grinding guitar samples. Ultimately, this new approach lost out to the previously established approach, as *Street Fighter IV* adopted the old character themes en masse and its sequel *Street Fighter V* has taken the same approach.

We get the lowdown on sound from the audio director and music producer of *Street Fighter V*, Yukinori Kanda.

» [Arcade] The *Alpha* series threw out character themes for a more uniform soundtrack.

BEATS WHILE YOU BEAT

DARRAN
Ken's theme is a brash, aggressive tune with a heavy beat that sums up Ken's cocksure personality perfectly. There's a ridiculously loud cover on YouTube by LittleVMills so make sure you give it a listen.

NICK
Okay, so it's the Ryu theme from *Street Fighter II. I know*. But, it's a well known fact that *Daytona USA* vocalist Takenobu Mitsuyoshi improves everything he touches with his golden vocal chords, and back in 2003 he performed a vocal cover of the classic tune for a *Street Fighter* tribute album. Seek it out!

DREW
I once wandered into gardens on a dusky summer evening. I heard Guile's theme and went to investigate, and saw a man playfighting with his dog he was shouting "*Hadoken*" and the dog was doing Guile's somersault attack in reply. So, yeah, Guile's theme is my favourite.

MEME THEME SUPREME

While some scientific discoveries are the result of years of research, others are stumbled upon completely by chance – and when humanity uncovered the universally appropriate musical backing for any piece of video footage, it was the latter. In 2010, someone combined video from the *Super Mario Bros* movie and audio from *Super Street Fighter II*, then uploaded it to YouTube under the username guilethemefitsall. This pioneer soon revealed that their username was no mere boast, as a series of clips showed that Guile's theme goes with everything. The music was inserted into scenes including Mufasa's death in *The Lion King*, Susan Boyle singing and the countdown from, erm, *Countdown*, and fit each of them as if it had had been commissioned bespoke.

The phenomenon was so powerful that the guilethemefitsall account racked up 3.75 million views across 17 videos, and copycats quickly emerged. Soon, Guile's theme was plastered atop videos of drunk people trying to stand up, Uncle Phil's pool hustle in *Fresh Prince Of Bel-Air* and Gordon Ramsay blocking a slap to the face. Some of these achieved as many as 3.5 million views of their own, but the most popular was one set to footage from the Japanese film *Kamen Rider Decade: All Riders Vs Dai-Shocker*, which achieved a massive 6.5 million views. So the next time you need music for an epic birthday party, romantic night in or health and safety video that needs a little 'lift', consider Guile's theme.

How important is the music to the *Street Fighter* series?

In a series like this, which strives to bring out the individuality and personality of each character, music is a hugely important part. It lets us express the background, feelings and mood of each character in a way that players will understand instantly. It's less about music that blends in with the game and more about bringing out the character. The key is that as soon as you hear the intro, the melody, even the timbre of a particular piece, you know exactly which character's music you're hearing.

Why do you keep the same signature tunes for each character with each game?

These characters are so iconic to players around the world, and their theme music pieces are classics. Of course, we update the music for each game in line with the game's style or to be more modern, or in ways that show the growth of the characters, but we prefer to do that based on the existing melodies by remixing them or rearranging them, rather than introducing new music. I think this is the best way to show that Ryu is still Ryu, or this is the new Ryu. In saying that, part of me does want to give the characters new tunes sometimes!

In many *Street Fighter* games, the music changes when a character is near KO. What do you feel this adds to the game, when included?

In a word, immersion. I'm sure all fighting game players get that feeling as they come to the end of a match where their focus gets heightened, so the way the music changes at that time can help them feel the developing situation. It also makes the game more exciting, of course. We've use this technique since way back in the series, and the development of audio technology should let us keep exploring new ways of achieving an even better effect.

PRIZE FIGHTERS

HOW CAPCOM IS BRINGING STREET FIGHTER'S LEGACY BACK

Although Street Fighter's 30th anniversary was last year, that hasn't stopped Capcom from putting together a compilation of games to celebrate the popular series. It pulls together 12 arcade games from the popular series, including the original *Street Fighter*, five versions of *Street Fighter II*, the three *Alpha* games and all three games *Street Fighter III* titles, including the celebrated *3rd Strike*.

Several games will include the ability to play online, and save states are also featured. Capcom is also promising great presentation for the anniversary collection and will be adding a music player, concept art and numerous pitch documents for fans of the series to enjoy. Expect a review next issue.

STREET FIGHTER

GET IN THE RING

K.O!
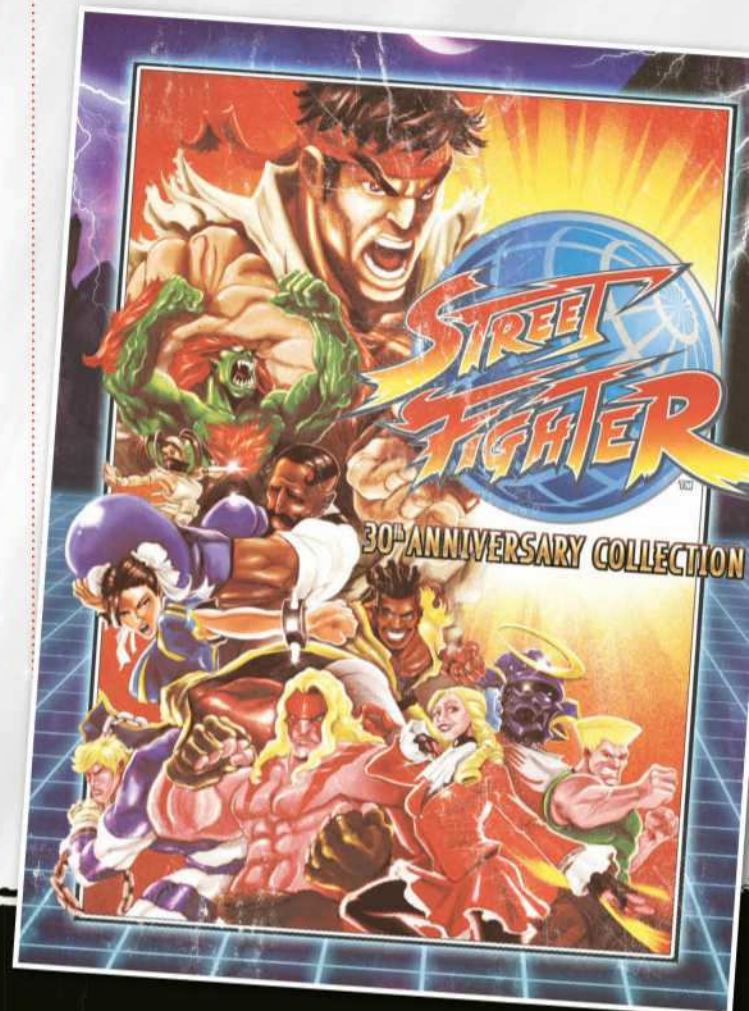
HOW THE PROFESSIONAL SCENE KEEPS THE FIRE BURNING

Street Fighter **isn't part of the competitive fighting game scene – Street Fighter birthed the competitive fighting game scene as a whole.** Or to be more accurate, Street Fighter II did. Prior to the 1991 blockbuster, most fighting games that allowed player versus player combat restricted the combatants to two characters with identical skillsets. Even the original Street Fighter included Ken solely for the purpose of having someone that matched up equally with Ryu. However, Street Fighter II's character diversity and thrilling combat made competition inevitable and tournaments began to spring up in arcades around the world, with the first officially sanctioned by Capcom held in 1991 at Milpitas Golfland, California.

Throughout the Nineties, players would trade tapes of far-off tournaments to learn techniques used by players like Alex Valle and Daigo Umehara. Since then, the rise of the internet has allowed the fighting game community to strengthen considerably – players can communicate with ease, sites like YouTube and Twitch have made it easy to share technique videos and broadcast tournaments, and of course online gaming allows the best players to compete with each other remotely. The rise of the annual Evolution tournament series, supported by Capcom and other developers, has also provided a focal point for outsiders to see the best in action.

The fighting game scene can be highly influential in shaping the perception of games, which is most notable in the rehabilitation of Street Fighter III's reputation. The series was not a strong performer in arcades, and received a tepid critical response when it arrived on the Dreamcast. But today, genre aficionados consider 3rd Strike one of the greatest 2D fighting games, due to continued competition at Evolution and a famous comeback video in which Daigo Umehara parries a full super combo from Justin Wong.

"I think the competitive scene is awesome but I do believe that most players probably still don't know how awesome/important the competitive scene really is," says Justin, who holds a team Street Fighter III: 3rd Strike championship victory at Evolution alongside his many Marvel Versus Capcom wins. "Most players are casual players and they just play the game for fun and because of nostalgia purposes at this point." Still, nostalgia drew crowds back to Street Fighter IV, and in turn Street Fighter IV helped to grow the competitive community. When introduced at Evolution 2009, it attracted over 1,000 players on its own

– considerably more than the 700 that showed up to the 2004 event across all games, but itself dwarfed by the 5,000+ that registered for Street Fighter V in 2016. What is it about Street Fighter that draws players to Evolution? "I think that the name alone, 'Street Fighter' will always bring people back. Its a franchise that has been around before I even knew what videogames were and I will always support it," says Justin.

Of course, that's just the big event – plenty of other Street Fighter tournaments are held around the world every week both online and off, with officially sponsored events under the Capcom Pro Tour banner. And if the thought of glory alone doesn't motivate you, the most recent Capcom Cup had a prize pool of $380,000, so there's a great incentive to get out and prove your skills.

We spoke to Capcom's community manager, Matt Edwards, manager to discuss the finer points of fighting your friends and beyond.

When did you start realising Street Fighter had a big competitive scene?
Personally? I can't remember the exact issue number but I remember games™ ran a feature about the fighting game community, talking about players like Justin Wong and referencing Evo Moment 37. This would've been back in the early Noughties, back when I used to play Street Fighter III: 3rd Strike with friends on the original Xbox. That was the first time I became aware of competitive Street Fighter and its community.

Why do you think Street Fighter III had a big revival in Japanese arcades later in its life?
It's no secret that 3rd Strike is one of the most

» [Arcade] Ryu has seen a good amount of play in tournaments across multiple games.

COMPETITIVE CLASSICS
OUR FAVOURITE TOURNAMENT MOMENTS FROM OVER THE YEARS…

EVO MOMENT 37
■ Justin Wong has a commanding health lead over Daigo Umehara, and goes in for the kill with Chun-Li's Super Art. Daigo can't block it, as any hit will kill him, so he parries the entire combo with expert timing, then immediately launches his own combo for an epic comeback. The crowd goes wild and a viral video is born.

SNAKE EYEZ WON'T DIE
■ Fighting for the pride of his southern California team against its northern California rival, Darryl 'Snake Eyez' Lewis (Zangief) is the team's last hope – it's one versus five. In a match against Ricki Ortiz (Rufus), he manages to pull off extraordinary wins, baiting out his opponent's moves on near-zero health before hitting his own Ultra.

YOGA FIRED
■ During a Super Street Fighter II Turbo tournament at 37 Reloaded, Daigo Umehara's Ryu plays eltrouble's Dhalsim – a match heavily favouring eltrouble. But when a super Yoga Inferno leaves Daigo on a sliver of health, the Japanese legend fights back and knocks out his opponent from 90 per cent health – a rare comeback.

technically demanding entries in the main *Street Fighter* series. This is something that the Japanese community thrives off. They were the first to show the true potential of the parry system, and in recent years, they're still discovering new tech. It's one of the reasons why the Cooperation Cup – an annual *3rd Strike* tournament where teams of five face off against each other in Japan – is so entertaining to watch. There's always a chance you'll see something completely new in what many regard as the pinnacle of 2D fighting games.

Would you see *Street Fighter* as a series that caters to competitive gamers first, and casuals second?
The life cycle of a fighting game is determined by the community that plays and supports it. That's why *Super Turbo* and *3rd Strike* maintain an active competitive scene even today while many other fighting game titles are comparatively stagnant. The mechanical base has to be finely honed for that to happen, though. That's what *Street Fighter* has been at its core since *Street Fighter II: The World Warrior*. It's a fighting game that can be enjoyed against the computer as you battle against a series of AI opponents with the chance of a secret boss at the end. But when you switch out the CPU for a human opponent – one that can level-up alongside you as you try out different characters and strategies – that's when Street Fighter becomes so much more. But Capcom will always encourage people to embrace the competitive side of the *Street Fighter* community. Without it, the hype moments and rivalries

just wouldn't exist, and that's ultimately what *Street Fighter* is.

How has the competitive scene changed as online gaming has become popular?
When *Street Fighter IV* released on consoles back in 2009, it was the first time that the series was able to fully embrace the 'world warrior' mantra. The era of being a hometown hero or the best at your local arcade was essentially over. Players now had the opportunity to prove themselves against the best in the world, all from the comfort of their owning living room. This led to more players travelling to tournaments like Evolution in the US and Stunfest in France. They got valuable experience against international competition and we saw lots of new faces breaking into the Top Eight. Skip to 2018 and the impact of online gaming has gone even further. Streaming services like Twitch, YouTube and Facebook allow anyone with a smartphone, tablet or PC to watch a *Street Fighter* tournament as the action unfolds in real-time. Professional streamers and commentators work diligently to frame and narrate each match as professional *Street Fighter* players – some of which now command healthy salaries from sponsors as they compete for prize pools in the hundreds of thousands of dollars – throw down in *Street Fighter V: Arcade Edition*. That's where online gaming has taken the *Street Fighter* series.

What influence does *Street Fighter* competitive play have on character balance?
It's fair to say that *Super Turbo*, *Alpha 2* and *3rd*

Strike aren't the most balanced fighting games in existence. Chun-Li, in particular, dominates in the latter two games. But while these arcade games had to (for the most part) stick to their original forms, the modern *Street Fighter* titles can be patched and updated as necessary. Indeed, the dream is to have a *Street Fighter* that's perfectly balanced with every character match-up being even. Unfortunately, though that's impossible. If you change one frame to make a specific match–up more balanced you will inevitably affect five other characters in different ways. The best Capcom can do is to observe professional-level play at *Street Fighter* tournaments and keep an eye on the community tier lists for characters. This information – coupled with the mechanical insight of the development team – is how the character balance is regularly revised. It'll never be perfect, but I feel that *Street Fighter V: Arcade Edition* is one of the most balanced fighting games ever made. You only need look at the character diversity in recent Capcom Pro Tour tournaments to know this to be true. ✱

» [Arcade] It may seem impossible to pull of professional-level fighting techniques, but you can do it with enough practice!

» **Matt Edwards** works with the *Street Fighter* community.

WATCH THE BIRDIE
■ In the grand finals of the Capcom Pro Tour 2017, Tokido (Akuma) has full health and is at match point, and his opponent MenaRD (Birdie) is on 15 per cent health. But MenaRD comes back, smashing two thirds of his foe's life bar in a single combo en route to victory – not only in that game, but ultimately the tournament.

CUSTOM CLASH
■ In the finals of the Battle By The Bay tournament in 1996, John Choi (Ken) is facing off against Alex Valle (Ryu). Both players are on low health in game one, when Valle decides to unleash his custom combo – which he hits, but fails to finish with. Choi fires back with his own combo, leaving Valle susceptible to a final dragon punch.

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THE 8-BIT
ARCHITECTS

We often don't often stop to take a look and appreciate the architecture around us, and that's definitely true for gaming worlds. Here, we pay tribute to the urban cityscapes of the 8-bit era

Words by Alexander Chatziioannou and Konstantinos Dimopoulos

Gaming worlds used to be stark, empty places. Oblong spaceships would traverse the void with so little to do they'd just shoot one another on sight. Abstract tennis rackets would bounce square balls over pitch-black fields. Then, at whatever pace technology permitted, worlds began to form, and eventually entire cities would become possible. Urban spaces, however, can't be empty by any stretch of the imagination. They require residences for the congregation of humanity residing in them to sleep, eat and watch TV in, places for them to work at, as well as roads of all sizes to travel between these points. They're kept alive by a canopies of utility poles and traffic lights while below their streets they're punctuated by sewer grates and litter. Unlike space, you can't depict a city with a black void.

Then again, you can still use the darkness as a night sky, and it was this sort of blackness that served as the background for *Missile Command*'s urban centres. Atari's widely ported arcade classic tasked players with defending six heavily stylised cities consisting of a couple dozen pixels each from nuclear annihilation. Treating cities as tokens, or simple targets to be shot

at, was as straightforward and simple as things got; it's no wonder that early city depictions never moved much further than this. The fact remains, though, that it was exactly the use of urban centres along with their implied millions of human lives that made the horrors of *Missile Command* feel relatable, and it gave the game its memorable context.

Rampage, a definitive game of civic demolition, was a fun, pulp-like arcade offering that brought vivid neighbourhoods to 8-bit monitors. It featured procedural buildings, and several cities for radioactive monstrosities George, Lizzie and Ralph to destroy. Each city/level comprised its own skyscrapers, evocative silhouetted backgrounds, tiny people, buses, security forces, and even architectural styles. The illusion wasn't totally convincing, obviously, but at least every screen felt both different and decidedly urban. The more explorable environments of the superficially similar *The Movie Monster Game* by Epyx further distinguished individual cities by incorporating famous landmarks. Playing as non-copyright infringing versions of Megatron, Godzilla or even the Blob players could demolish Tokyo Tower, Big Ben and the Statue Of Liberty, while terrorising

» [Amstrad CPC] *Rampage* dares to ask who the real monster is. It's us. We stomp on humans for fun. Definitely us.

» [ZX Spectrum] The marvellous *Contact Sam Cruise* gave you a surprisingly detailed city to investigate.

» [C64] Whether a yellow or a black belt seems debatable but that is definitely the Sydney Opera House in *International Karate*'s background.

residents, chasing cars and avoiding the army. Despite the isometric view, sensible city blocks and larger cities, despite even the provisions for public spaces, the ambitious urbanism of *The Movie Monster Game* just wasn't as spatially immersive as that single scene of *Saucer Attack!*. Granted, this was a simpler game, but its first-person perspective, and its colourful, detailed, lively Washington somehow turned a mere UFO shooting gallery into something strangely believable.

Washington was not the only recognisable city to be rendered in a smattering of garish colours and low resolutions as an intricate but mostly static background. For *Saucer Attack!* (much like for 1951 classic *The Day The Earth Stood Still*) the relatable setting served as a simple way to create a sense of urgency, though there were several other reasons to try and convey the idea of a real-world metropolis, too. *International Karate* placed its first duel under the Sydney Harbour Bridge, overlooking the iconic Opera House, a choice that not only differentiated it from *The Way Of The Exploding Fist* with its tranquil dojos and snow-capped peaks, but also bestowed it with an edginess, an air of urban cool. *California Games* made sure we saw the Hollywood sign and the Golden Gate Bridge in the background to justify not just its name, but also the entire premise of its activities through a suggestion of geographical proximity.

The problem with these cities was that, lovely as they were to look at, perhaps even eliciting an ingratiating sense of pride that came with having visited or lived in them, they really didn't amount to anything more than

» [C64] Catching air and scraping knees under the iconic Hollywood sign in *California Games*.

a postcard. The universally acknowledged symbols of Paris (in *Bob Winner*), Moscow (in *Human Killing Machine*), and Athens (in *Bomb Jack*) were there, but you couldn't explore these cities, understand the ebb and flow of their urban spaces, their energy, the people who lived in them. To attempt something like that, even a grossly oversimplified version, we needed a very specific genre to emerge from the sewers and the alleys, take over the streets, and start stirring up trouble.

Drawing from the urban dystopias portrayed in films like *The Warriors* and *Streets Of Fire*, side-scrolling beat-'em-ups became prominent in the late Eighties. A slew of popular coin-op titles such as *Dragon Ninja*, *Renegade*, and *The Ninja Warriors* were ported to home computers, followed closely by a parade of similar games like Silverbird's *Street Warriors* and CRL's *Time Fighter* as smaller publishers jumped into the fray.

Naturally these games did not paint the most welcoming picture of civic life. Like its cinematic counterpart, the genre exploited that decade's paranoia surrounding the metropolitan downtown, popularly portrayed as a festering cesspool of lawlessness and deviance, ready to explode into violence at any given moment. Packs of skinheads roamed the parks ▶

» [C64] Clear skies, a flag flying proudly, and a couple of murderous alien vessels to ruin the day in *Saucer Attack!*.

» Antescher, *Ant Attack*'s city, was devised by Sandy White.

» [ZX Spectrum] Only a few moments before a decidedly non-urban swarm of bees starts chasing us around the block in *720°*.

SCORE :709   Rescued :1

P1 000400   HI 060000   P2 000000
                 TIME 38   PUSH 2P

SCOOP

20   20   20   923
AMMO   GIRL   BOY   TIME   SCAN

1UP 225   St. TIME 153   AMB
           1   PLAYER   9820
                ENEMY

▶ at nighttime in *Target: Renegade*, whip-wielding dominatrices patrolled the streets of *Double Dragon*, and the alleys of virtually every genre title were infested with hoodlums committing crimes against civic society. In more humorous efforts, such as *Street Hassle*, you took the role of the neighbourhood menace yourself, terrorising blind seniors and feisty old ladies that could whip up a flurry of handbag strikes. However the roles were di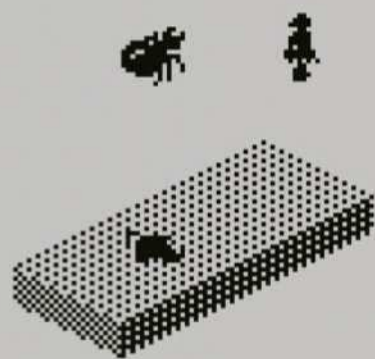stributed though, it was clear that these were battlefields for factions to fight in unto death, or, at least, unto the game over screen.

These exaggerated tensions were reflected not just in the cast of characters populating the seediest of genres, but also in the deliberate choice of environmental visuals. All the instantly recognisable signifiers of urban decay were there: tattered Warholian posters adorned the walls of *Shinobi*, automobile husks and towers of neatly stacked tires dotted the landscape in *Vigilante*'s junkyard, while boarded up storefronts, smashed windows, and burning barrels were ubiquitous.

Hollywood's exploitative dystopianism was not just an indirect influence. Several of that era's gritty tales of urban implosion were adapted for the medium calling upon our solitary protagonist to deliver justice or revenge against the unruly lords of the city. *RoboCop*'s Detroit, *Cobra*'s LA, and the New York of *Death Wish 3* were among the numerous locations where the blood of innocents stained the pavements and civilisation seemed always on the brink of collapsing downtown.

CONSOLE YOURSELF Great 8-bit cities that found home on consoles

SkaraBrae

CITY   AC HP MP
EXPLORER   10   8   0 Bard
RETRO   10 12   0 Sorcerer
            10   7 17 Warrior

RIVER CITY RANSOM
NES
■ River City Ransom, also known as Street Gangs in PAL territories and Downtown Nekketsu Monogatari in Japan, is the game that revitalised the side-scrolling beat-'em-up genre by adding RPG and open world elements to it. Cleaning up River City will expose you to vibrant pixel art urban scenes, and several shops, saunas and restaurants.

OPEN

DRACULA
INTELLIVISION
■ Considering the Intellivision was released in 1979, *Dracula*'s scrolling, recognisably urban cityscapes allowing for night-day transitions should be considered both a technical marvel. Few games had allowed people to play in cities before *Dracula*, and even fewer cast them as vampires out to feed themselves, and turn the occasional passerby into a thrall.

THE BARD'S TALE: TALES OF THE UNKNOWN – VOLUME I
NES
■ The fantasy town of *Skara Brae* transcended the many limitations of the 8-bit console generation, and managed to recreate its classic, expansive RPG charms on the NES. Expect a cohesive settlement for your adventuring party to explore, filled with inns, guilds, towers, temples and, above all, danger.

Violence aside, the first real taste of urban exploration in a more fleshed out, more believable urban environment was delivered by Sandy White's *Ant Attack,* and its city of Antescher. Yet, the "initial creation of city-like structures was purely accidental, and came well before any thoughts of actually building a city, or indeed a game", Sandy remembers. "I was playing around with an Acorn Atom writing code which printed isometric cubes randomly onto the screen. Quite often as layers of cubes continuously built up, weird and wonderful buildings and cityscapes would appear by chance." Adding a bit of code to line the cubes up he noticed those fleeting glimpses of strange places suddenly becoming almost consistent, and their Escher-like qualities coming into view. There was "an 'atmosphere' which came with those images, a strong feeling as though I were peering through a window into another place", as Sandy puts it.

Having a feeling was not enough, and while tackling the mammoth task of fitting all the urbanistic data into 16KB, the city itself had to be designed. "It arose organically, built little by little with no initial plan. As the available ground space of 128x128 squares began to fill up, eventually it became necessary to plan things out on squared paper with a binary number in each square to represent the associated stack of bricks." Interestingly and "as it was such an effort to do this, and get it into the Spectrum, and saved off to cassette", once a building was placed, there was no moving it ever again, in a process not wholly dissimilar to the physical environment's resistance to change. "There is no doubt that there are also influences from my native city of Edinburgh, itself replete with stone buildings ancient and new, along with a good sprinkling of viaducts, graveyards, stone staircases," Sandy adds. Wisely, what with *Ant Attack* being all about locating and swiftly escorting your partner out of the city landmarks, paths and navigational aids were top design priorities. ▶

CITIES OF TEXT

It was interactive fiction authors who crafted the more intricate 8-bit cities. Steve Meretzky discusses Rockvil from A Mind Forever Voyaging

What was the inspiration behind the city of Rockvil?

I just wanted a generic mid-size American city. I thought that if I made up a city instead of using a real one, it would make more people feel like. 'This is my city.' Also, making up a new city gave me freedom of geography. As for the atmosphere, it was determined by what decade you were in, how far the city had fallen into the effects of 'The Plan', and not so much by its design, though for your initial visit the atmosphere I was aiming for was 'Anywhere USA'. By the way, Rockvil is named after my wife Betty Rock. We got married a month or so before *AMFV*'s release, so when I named it she would have still been my fiancé.

How did you approach the plan of the city? Did navigational considerations enter into it?

I had majored in architecture, and later in construction management, and I took several urban planning courses as part of that. So, I knew something about how cities grow and morph over time, and what patterns of zoning and development are typical; I used that to design the city. Things such as a denser, older urban core with ageing landmarks and monumental civic buildings, newer areas located further out, and indications of urban redevelopment were considered. Navigational considerations weren't an issue; the size of the city was. *AMFV* was the first 'Interactive Fiction Plus' game that Infocom made, meaning it required 128KB of memory instead of 64KB (which was a lot at the time), and we weren't going to support a number of old machines. This allowed the executable size to approximately double to 256K, which was still a pretty constrained size even if all that's included is text and code. I had to be super-vigilant to make sure nothing was included that wasn't absolutely necessary either to create a believable environment or to support the plot elements.

How is creating believable text-only urban spaces different from visualized ones?

I was able to describe a building, an intersection, an event in 100 or 200 bytes. Trying to create something on the scale of Rockvil graphically would have been inconceivable in 1985. The primary point is that a text-only city could be larger, more detailed, and therefore more realistic. Also, since I was trying to create that 'Anywhere USA' sense of 'this could be my city', letting players visually map out their own cities or neighbourhoods onto Rockvil was easier with a text description.

What part of Rockvil are you most proud of?

I'd say the malleable nature of the city as it falls apart over the decades. Again, I had a limited number of KB to work with, and often had to convey a location's changing character just by changing a single adjective in a location description. It was a real exercise in using the tiniest text changes to convey big, sweeping changes. Most likely, if I had no limits, I'd have written completely new descriptions for each decade, but the constraints of keeping most of the description the same may have actually worked out well for the game's purposes. It provided the player visiting Rockvil in the later decades with a sense of familiarity, while simultaneously giving the feeling of something being wrong; something being off.

STREETS OF RAGE II
MASTER SYSTEM

■ The gang of Mr X returned to terrorise law-abiding citizens, and to allow Sega to perfect the scrolling fighting game. Granted, the Master System port is inferior, and yet it offers a fun experience through the locations Eighties pop culture loved to demonise and hoped to gentrify: downtown streets, clubs, waterfronts and even stadiums.

DOUBLE DRAGON
NES

■ *Double Dragon*, the archetypical city brawler, defined videogame depictions of the brutal, lawless inner city areas that seemed to terrorise the collective consciousness of the mainstream world back in the day. Its NES port might not have been able to provide two player co-op, but it added a fair bit of urban platforming.

MOTOR CITY PATROL
NES

■ *Motor City Patrol* was one of the first top down, open world driving games, and by definition a precursor to *Grand Theft Auto*. It was also painfully dull and incredibly gray. Being a Matchbox licensed offering where you played as the police didn't help much, though patrolling its five large precincts did offer a glimpse at gaming's future.

WISH YOU WERE HERE

Immersive home computer urban landscapes

THE UNTOUCHABLES

■ Infogrames had tried something similar a couple of years earlier with *Prohibition*, but it took Ocean's film adaptation to bring prohibition-era Chicago to life, an urban battlefield of Tommy guns, gorgeously curved cars, and precariously positioned baby strollers rolling down the steps of Union Station.

HILLSFAR

■ Unscrupulous adventurers could relieve every Hillsfar home of its valuables. Upon entering, a frantic action sequence gave you limited time to explore, loot and evade suspicious guards. Success meant more beer and gossip at the local pub; failure sent you on an involuntary trip to the arena.
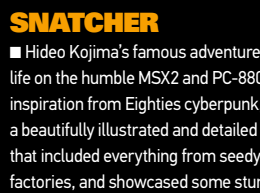
SNATCHER

■ Hideo Kojima's famous adventure game began its life on the humble MSX2 and PC-8801 micros. Drawing inspiration from Eighties cyberpunk, Neo Kobe City is a beautifully illustrated and detailed futuristic dystopia that included everything from seedy bars to abandoned factories, and showcased some stunning skyline views.

JUDGE DREDD

■ Even more interesting than Mega-City One's slums and skyscrapers is its unique interactive map, charting criminal activity, from tobacco smoking to alien seed deals, via a series of beautifully suggestive icons. Select one and you'll instantly arrive at the scene, be it sewer or high-rise, to enforce Dredd's unique brand of justice.

MERCENARY

■ Modelling a small planet in real time 3D was ambitious on any 8-bit machine, and yet this is exactly what *Mercenary* achieved. Targ's most impressive sight was the modernist Central City. A place that despite the planetwide civil war was proud of its stadiums, museums, institutes, and exhibition centres.

BATMAN: THE CAPED CRUSADER

■ The comic book aesthetic for Gotham provided the definitive one in the 8-bit era. Stacked panels featured imposing Georgian mansions and huge warehouses, while on the distant horizon corporate towers loomed. It meant Ocean's game looked visually gorgeous.

DUN DARACH

■ Being the mythical city of a fantasy setting didn't prevent *Dun Darach* from sporting a realistic urban structure. This was a believable city with distinct districts, sensible land use patterns, an economy, lively inhabitants and, importantly, both a thieves' guild and a network of public torches to be lit during the night.

RENEGADE

■ Arguably the game's most iconic level, *Renegade*'s subway creates a dystopia of small details. The grimy windows of an inoperative train, graffiti scrawled on its motionless husk, a locked metal railing blocking escape to the city above. The gang closing in, metal pipes in hand, are simply this world's natural predators.

» Hervé Lange wanted to create a nonlinear, explorable play space for *BAT*.

There's still one question that remains unanswered, though. Was Antescher, the first three-dimensional game city many people ever visited, a place stylised to meet technical requirements, or was it the ruins of a long forgotten town? According to Sandy it was, in a way, both. "In the beginning it was an excavation, a discovery of random fragments which had, until 1982, lain waiting to be discovered beneath digital sands, and subsequently a design effort to turn these discovered ruins into something useful to a playable game. Perhaps it wouldn't stretch the analogy too far to call that an urban environment built on ancient ruins."

With more realistic environments came the need for different ways of engaging with them. These were places inhabited by living beings whose cycles of activity revolved around more than just work and survival. Our protagonists needed the occasional respite from either exploration or confrontation. How did these urban dwellers have fun? The answer is by organising some friendly competition, of a kind that takes advantage of the metropolitan morphology. *720°* offered not only four skateboarding parks but, perhaps even more memorably, a whole city block's worth of space filled with makeshift ramps and slippery puddles to practice your skills. Other competitive endeavours associated with the inner city also had videogames produced after them; most notably breakdancing in titles like *Break Street* and *Break Fever*.

Not that more conventional sports remained confined in the stadiums and courts with which they're associated. Epyx's *Street Sports* series featured some wonderfully atypical settings for its games. *Street Sports Basketball*, in particular, gave you a choice between a school playground, a pristine suburban yard, a dingy alley, and a garage that wouldn't look out of place in *Renegade*, all complementing the variety of decidedly urban character archetypes you could pick for your team.

Driving through cities, though not much of a sport, is one of the predominant ways in which we get to experience contemporary urbanism, and doing so in a super-fast car seems to have been a widespread fantasy during the Eighties. It's no wonder, then, that racers such as *Cisco Heat* proved popular across 8-bit micros. Unlike the majority of genre offerings that had you race through

» [Amstrad CPC] Every sensibly planned city has to cater to the fundamental needs of its citizens; hence *BAT*'s toilets.

THE TOILETS
ALTHOUGH THEY ARE EQUIPPED FOR ALL RACES THEY ARE NOT VERY PLEASANT

» [ZX Spectrum] Static screenshots simply fail to do *Turbo Esprit's* groundbreaking, smooth scrolling 3D cities justice.

» [Amstrad CPC] Using a New York phone booth as a launching pad for an impressive backflip in *Shadow Warriors*.

» [C64] After they cleaned up all the blood, this alley made a perfect makeshift court for *Street Sports Basketball*.

» [C64] Every self-respecting bar in the cyberpunk future will come with its very own PAX terminal, just like *Neuromancer's*.

"From a visual point of view, we were influenced by Blade Runner, Metropolis, and Enki Bilal"

Hervé Lange

graphically less demanding countrysides in the tradition of *Out Run*, *Cisco Heat* attempted to convey the intensely urban atmosphere of San Francisco. Having the Golden Gate Bridge on the screen border, including hills to traverse, and even allowing the occasional building to scroll by just wasn't convincing enough though, despite admittedly evoking a hint of the city.

Mike Richardson's 1986 *Turbo Esprit,* on the other hand, really did place gamers inside an unexpectedly realistic, open world city that shined on the Spectrum. The game that's believed to have an influence on *Grand Theft Auto* series had gamers chasing drug lords in four complex cities that were always in motion. Said expansive urban centres came with ranked road networks, and were convincingly functional places. Traffic lights regulated traffic, AI-driven cars obeyed laws while overtaking each other, pedestrians used zebra crossings, road-works added a touch of danger, and reckless parking manoeuvres could lead to traffic jams.

Several RPGs strived to achieve vivid urban centres, but it was innovative adventure games that came close to achieving a sense of actual spatial immersion. Based on the definitive cyberpunk works of William Gibson, Interplay's *Neuromancer* offered versions of both physical and cyber urbanism, with the former, according

to Troy Miles, serving mostly as a gateway to the latter. Troy particularly loves the in-game PAX machines as "they combined the web as we know it now with an ATM". Of course, the book was widely read by the development team, and influenced all design decisions, though Troy admits that getting most of *Neuromancer's* iconic locations into the game demanded several technical tricks, including breaking it up into levels. Finally the illusion of a world much bigger than the C64 should allow for was achieved. As for Chiba City's civic life, it was enhanced by giving "dialogue a techno-slag feel to keep it interesting and humorous, [and] providing each NPC with their own backstory".

BAT by Ubisoft, originally designed for the Atari ST, was more ambitious. Hervé Lange wanted to create a non-linear world in which players could freely evolve. The "idea that the plot takes place in a city imposed itself quickly" as the foundation for a setting teeming with life, and Terrapolis on planet Selenia was born. Hervé describes Terrapolis "as a dense patchwork of contemporary, modern and futuristic styles, with a pinch of grotesque elements", that was treated as a dynamic actor itself. "The place regenerated NPCs such as policemen, merchants or thieves depending on the aggressiveness of player actions."

Terrapolis had a world crafted around it. A setting of "capitalist expansionism compelling eccentric billionaires to extricate themselves from Earth, build space exploration machines based on black holes, and thus colonise entire planets". Thus was inhospitable planet Selenia able to support the dome of a dystopian, overpopulated megacity, which allowed Hervé to create a rich place filled with exotic creatures and possibilities.

"From a visual point of view, we were influenced by *Blade Runner*, Metropolis, and Enki Bilal," he mentions, pointing out the horizons of skyscrapers forcefully towering over more conventional, humbler cities. "Indirectly, the influence of Paris with its typical

neighbourhoods, railway stations, botanical gardens, bars, nightclubs, and Haussmannian boulevards leading to smaller alleys of street vendors and shops" is also evident. An important goal of the design was to create a comparable "sense of richness through different neighbourhoods offering varying gameplay opportunities, and thus reinforce the idea that a complete world had been recreated".

BAT was followed up by *BAT 2*, which swapped its Parisian inspirations for Roman ones, but didn't offer a radical change of direction. For that we have to go back to *Ant Attack* and look at its sequel, *Zombie Zombie*, which "biggest innovation was the addition of a rudimentary editor to aid city construction, construction itself becoming part of the gameplay" as Sandy White remembers. In this way, the man who laid the foundations for the urban environments of the late Eighties, also paved the way for *SimCity*, a game emerging at the tail end of the 8-bit era heralding a new paradigm of interaction with urban environments. Exploring or fighting your way through them, could be replaced by actively shaping and watching them evolve. But that is another story about another generation of interactive cities. ✱

» [Amstrad CPC] Detroit's finest gun-toting gangsters and chainsaw-wielding maniacs have surrounded our hero in *RoboCop*.

THE MAKING OF
RESCUE

RESCUE HAS ENJOYED CULT STATUS AMONGST SPECCY FANS FOR A VERY LONG TIME. NOT BAD FOR A GAME PUT TOGETHER IN CREATOR STE CORK'S BEDROOM

Words by Paul Davies

Fans of the game will know that *Rescue* is a straight up sci-fi search-and-retrieve mission, where our hero takes on an infested space station to rescue a high-value scientist and his magnum opus. All you need to do is get both scientist and his experiment back to your ship for takeoff. What makes this so difficult is that you don't know which, out of eight scientists, is the right one; this is randomly selected at the start of the game. The pesky aliens trying to destroy the place don't help either.

"It is difficult, and it isn't." Ste Cork explains. "*Rescue* is rather unusual in the way you have to meet the winning criteria. You could, in theory, just take off with one scientist and win the game; or you could have

» [ZX Spectrum] Ste's game has some impressive visuals and it moves along at a nice pace.

seven and still lose. You don't know until you commit to pressing takeoff, after adding fuel, too, of course. Then there's the heart-stopping couple of seconds while the FX are being played for takeoff, before you finally get either the success or fail screen. Certainly, to rescue all eight scientists, if you set that as a goal, is very hard."

After picking up his first Spectrum in 1984, Ste released his first game *CaGara* just one year later, through budget label Players. He then went on to complete his second game *Wibstars* in 1987, through software house A&F. After starting work for Icon Design, Ste began to write the game *Colony*, this time published by Mastertronic, who he also approached a year later for the release of *Rescue*.

Ste elaborates, "[Mastertronic] had some good games out, and a lot of games that were relatively poor. They got better I think once they'd been around for a while and I think by the time I was ready to release *Rescue* they were a 100 per cent decent house, so I was happy to approach them. They were the first company I went to, in fact."
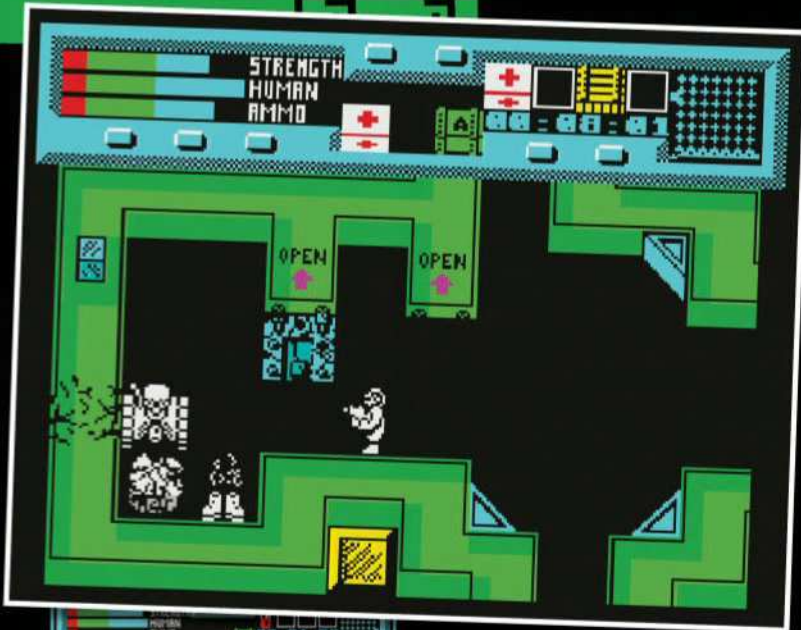
In the era of bedroom programmers it wasn't unusual that

one person could end up doing everything involved in a game's development, though there were times where a little helping hand was needed. In this case, Ste brought in the help of good friend and composer Tony 'Tiny' Williams. "Tiny and I are really close; I've known him since 1986. He was always the guy I'd go to for audio work. Very easy to work with, good music, good solid code, and he was happy to do work for me on the promise of royalty cuts later." Also working on *Rescue* was Mark O'Neill. "He was a brilliant artist in the 8-bit days, with that trick of making things look good in single-colour sprites, like the Spectrum was forced to use."

From a player's point of view, you'd assume *Rescue* was hard work to write given its big graphics, sharp fast movements and exquisite detail. "I had a lot of fun writing it", says Ste, "and to be honest it reused rather a lot of code from *Colony*. The engine similarities are pretty obvious once you look. That made it an easy game to write; but of course back then you could get away with things like that. The guys that ran Icon Design, Roger Lees and Mike Cohen, were really relaxed about those kinds of things.

» [ZX Spectrum] Wanted: experienced scientist immunity to bullets is essential. Free boots provided.

» [ZX Spectrum] These aliens are on the hunt, so it's best to try and avoid them.

I had less hours to write things at home of course after a day's work in the office, but given that most of the code was already written it wouldn't have required as much extra doing to it. I didn't really have a life outside of computers in those days. The classic geek, I suppose."

If you mention *Rescue* to certain Spectrum fans, there's a chance that one of them will quickly say Harrison Ford back to you. Well, take a look at its cover and you may well find out. Some may say that the cover star was a rip off Han Solo lookalike, others say coincidence. "I didn't even see the cover until I got mailed a freebie copy," Ste recalls, "I didn't see the resemblance, but I suppose once it's pointed out I can just about see it. If I squint a bit."

Another talking point apart from the gameplay is the loading screen; or indeed the lack of one. You'd think, given the quality of the game itself, it deserved a screen to do it justice. Apparently Mastertronic didn't. "I assumed they would paint something then slap a loading screen on themselves. In the end they didn't bother." Ste explains. "The first I saw of the boring '*Rescue* is loading…'

screen was when I got my free copy. It was too late to do anything by then. If they'd asked me what I wanted for the screen, or even to supply one, I could have got an in-house artist to do something, but they never did."

After *Rescue,* Ste went on producing games for the Spectrum over the next few years, before moving on to games for the Amiga, Atari ST and then PC, with the game OverKill being one of his favourites on that format. Ste continues to work in the industry and has many credits in notable games such as *X-Men: Legends, Quake 4, Marvel: Ultimate Alliance* and *Call of Duty: Black Ops III.*

Speccy fans will argue, though, that nothing beats the simplicity of an 8-bit shoot-'em-up. *Rescue* is one that will stay long in the memory for many of fans, not least in Ste's.

"*Rescue* had people writing into magazines about it and mapping out the ship. I was chuffed. That was really nice to see for something I'd just put together in my bedroom." ✱

» [ZX Spectrum] "My ammo. My beautiful, beautiful ammo. You should haven take me instead."

» Ste Cork is still in the industry today working on triple-A blockbusters such as *Call Of Duty.*

CORK CLASSICS
Try these Ste Cork hits out

COLONY
ZX SPECTRUM
■ Set in the future, Earth has become overpopulated and there's a need to grow crops on other planets. You control a droid whose job it is to grow and protect crops, as neighbouring aliens have acquired a taste for them. As you can probably guess, they're not the friendly type.

OVERKILL
PC
■ A vertical shoot-'em-up, *Overkill* puts you in control of your spaceship as you blast away at the alien enemies, leaving nothing behind. On your way, collect power-ups to improve your weapons and shields, then go on and destroy some more of anything that gets in your way.

PSYCHO PIGS UXB
ZX SPECTRUM
■ Take control of your own personal swine as you attempt to blow up other pigs in the area with the help of bombs that crop up around the screen. The last pig trotting wins here as the victor takes all in this explosive, anarchic free for all.

THE SIMPSONS
HIT THE NES

As The Simpsons' popularity skyrocketed in the early Nineties, the show proved it was fit for branching out into new mediums. Dan and Garry Kitchen tell us how they brought the world's most famous family to the NES

Words by Adam Barnes

Try to imagine a time before *The Simpsons*. **It's not easy, is it?** The much-loved cartoon family has been such a familiar staple of our lives for so long that even those who might be old enough to remember their first airing in 1989 likely won't recall the way life was without Homer, Marge and the kids. *The Simpsons* predates Google, DVDs, even the internet as we know it, and – love it or hate it – is just as integrated a part of our

» [NES] It was important for the developers to implement familiar places of the show into the games.

culture as any of those advances. The show first aired in 1989, and back then it was Nintendo which was ruling the roost; the Famicom was dominating Japan, and the NES was the console that revitalised an industry still suffering from the videogame crash in the USA, and brought with it new interest from licence holders. But it wasn't 20th Century Fox that sought to get a slice of this revitalising market, instead it was Acclaim that was hoping to capitalise on *The Simpsons* before *Do The Bartman* was even a twinkle in a marketing man's eye.

"In January of 1990," begins Garry Kitchen, one of the lead designers on *Bart Vs The Space Mutants*, "a couple of days before the airing of episode four of season one of *The Simpsons*, Greg Fischbach [founder of Acclaim] called me and suggested that I watch the episode. He was considering licensing the rights to make a *Simpsons* NES videogame and wanted to know if I was interested in developing it." Though the TV show had been an immediate success, no one could've predicted the phenomenon that it was set to become. Greg was a visionary, however, and had started Acclaim after leaving Activision with the dreams of becoming a huge videogame publishing house, initially making a name for itself with licensed titles. Garry knew Greg

» [NES] The concept of the x-ray glasses isn't just a storyline novelty, it has functional properties in the game, too.

through Activision where the pair had both worked, but from which the former had left in 1986 to form Imagineering with colleagues. All it took was a single episode of *The Simpsons* to get Greg intrigued by the idea, and he reached out to his old colleagues to see if they might be interested in developing a game around the licence. "Acclaim had relationships with 20th Century Fox," adds Dan Kitchen, the brother of Garry and cofounder of Imagineering, "and I believe it was a very expensive license for them, it was a very large product. It was one of their first large licences."

The Kitchen brothers and the team at Imagineering all had experience in the industry, having produced several Atari 2600 games. "My brother and I had taken the creative lead," says Dan, "with another producer who worked for us whose name was Barry Marx. We collectively got together and considered what would be the best for gameplay, the best selection of mechanics for gameplay and what would work for the license itself. So we flew out to California, we met with Matt Groening and the Fox people and went through a number of concepts. One that we liked that we had conceived – and that they finally signed off on – was doing a game based on the old science fiction movie *They Live*, with Springfield being taken over by aliens." The inspiration for this particular concept was first born out of the backs of comic books, adds Garry:

» Garry Kitchen was one of the lead designers of *Bart Vs The Space Mutants*.

CONVERSION CAPERS

How did Space Mutants shape up on other systems?

MEGA DRIVE

■ This was one of the best-selling versions of the game and had more refined visuals, slicker controls and overhauled sound effects – thanks to the more powerful hardware. While it didn't have the best art across the nine platforms, it still balanced slick movement with a more manageable difficulty. A step up from the NES version all the same.

NES

■ The original version of the game and therefore the one that every port had to hold a candle to. The NES original received the most care and attention, but once that foundation was set in stone – at least in terms of gameplay – every other version had a template to follow on from, which they all did remarkably well.
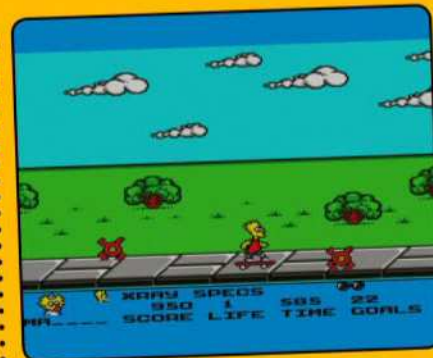
MASTER SYSTEM

■ This version brought with it the black outlines from the art of the Mega Drive equivalent, which helped to recreate that Matt Groening style a little more faithfully than the original NES equivalent. However, it wasn't *quite* as good, and did also bring over the same speed as the Mega Drive version - but poorer movement meant it was tough to handle.

AMIGA

■ If the Amiga version should be known for anything it should be its visuals, with high-quality pixel art that really took the backgrounds of the original NES version to a whole new level. There is even a fairly lengthy intro that - better than any of the other platforms - properly explains Bart's x-ray glasses. Arguably the best version of the game.

GAME GEAR

■ Like most Game Gear conversions, this is a shrunken down version of the Master System version, the same black edges at least made it easier to separate Bart and NPCs from the background - which would've been impossible on the tiny screen of the Game Gear. It wasn't especially popular on the platform.

ATARI ST

■ The ST version of the game was one of the few others that were handled in-house at Imagineering, not that there's much difference between any of the different platforms. This lacked the fancy intro of the Amiga version and didn't play quite as smoothly with a weird momentum to Bart's movement, but it does at least match the quality art.

AMSTRAD CPC

■ While on the surface the visuals look much better than the ZX Spectrum, this is perhaps the worst version of them all. The limits of the hardware meant that the x-ray goggles weren't quite as well handled, the mechanics were a little ropey and many of the *Simpsons*-based details were simply removed from the game.

ZX SPECTRUM

■ Naturally, the visuals had to take a knock when it came to downgrading to the ZX Spectrum, which was handled by British studio Arc Developments. However the gameplay itself is mostly unchanged, save for the fact that it's not a scrolling platformer but instead the screen-by-screen style that was typical on the hardware.

COMMODORE 64

■ The Commodore machine equally suffered because of its hardware limits, but just edged the Amstrad. It, too, failed to implement various finer details into the game, meaning that its visuals fell firmly on the basic side of things, but it still retained a scrolling screen and kept the mechanics as slick as they could be.

DONUTS 2

71910 9 573 12
SCORE LIVES TIME GOALS

X-RAY SPECS
50280 9 108 0
SCORE LIVES TIME GOALS

X-RAY SPECS
55370 9 710 0
SCORE LIVES TIME GOALS

X-RAY SPECS
52020 9 162 4
SCORE LIVES TIME GOALS

"Barry Marx and I spent a good deal of time kicking around ideas. In one brainstorming session, for some reason, we were recalling the cheesy advertising on the last page of comic books. The one ad that stood out for us was the x-ray glasses, enabling you to see through a girl's clothing. We agreed that Bart would have definitely been the first kid on the block to order a pair of these. Obviously, that led to the concept of an alien invasion, with Bart ending up as the only person in town who was able to detect the 'body snatching' aliens by using his 'ill-gotten' x-ray specs."

There were two aspects of the game that were set in stone by Fox before development went underway, though. The first was the choice of playable character; nowadays Homer is the popular favourite of the franchise, but there was a time when Bart was the show's star. With Bartmania only just beginning to form, Fox wanted to capitalise on its mischievous character, believing his 'don't have a cow' attitude would fit well with gamers of the time. "We considered a concept that was less Bart-centric," admits Garry, "but Acclaim pushed back, believing – rightfully so – that Bart should be the focus, given the target demographic of the game. They were right, of course. Bart was the character that drove the narrative of the series; for example, Bart was the focus of the famous opening sequence of the show, skateboarding through town. And every kid who owned an NES would want to play as Bart."

With the character settled, there was only one other area where demands were made and, considering the nature of the NES and the games that were released for it, there wasn't much chance that those in charge would want anything other than a 2D platformer. "From the beginning, Acclaim said that they wanted to do a side-view scroller, because of the popularity of *Mario*," says Dan. "That was what they wanted, a platformer. And so it was on that machine, given the 2D restrictions, that this was obviously the best way to show Bart and the characters." No one intended to compete head-on with *Mario*, though, the idea was instead to leverage the licence in the right way, to replicate the same humour, style and entertainment that *The Simpsons* was already making itself known for. This was handled in a number of ways, but Fox's co-operation meant that the team at Imagineering had a good deal of access to the show to help create the foundation for capturing the essence of the show. "Fox met with us on a number of occasions at the studio," says Dan. "They did have a liaison here through Acclaim, but Matt Groening did meet with us a couple of times and made sure that the character Bart was well created. He had sign-off on the way that Bart looked, the way that the backgrounds looked. We worked to emulate the look of the show as well as we could, putting in things like Barney's Bowl-a-Rama, putting in various other places that are in the show and representing them in the game like the Jebediah Springfield statue. We really were inspired by them to come up with the best scenes and the locations in the show and replicate them in the game. So they were great help for direction, for giving us b-roll of the show, for giving us reference art."

This was the first ever *Simpsons* game, after all, it needed to set the bar if it was to match the hype

» [Amiga] Across each of the different versions, the core gameplay and level design remains the same.

X-RAY SPECS
45580 | 9 | 213 | 10
SCORE | LIVES | TIME | GOALS
LISA

» [Mega Drive] The Mega Drive *Space Mutants* is a step up over the NES version in terms of visuals and overall gameplay.

X-RAY SPECS
2200 | 5 | 749 | 14
SCORE | LIVES | TIME | GOALS

X-RAY SPECS
14540 | 5 | 539 | 14
SCORE | LIVES | TIME | GOALS
MAR__

▶ that the show was getting. To Fox and Acclaim's credit, this wasn't a cash-in to try and get a quick buck from the craze surrounding Bart and co, there was a real intention to create that could stand out on its own. "The idea was to be specifically *Simpson*-esque," recalls Dan, "to take those things that are in *The Simpsons* and really play up that as much as we could for the character of Bart, to bring in the personality of the *Simpsons* and focus on the personality of Bart." Fox did at least hope to have a cameo for each of the main family members, adds Dan, which lead to "having Maggie in the status area, Lisa in the fair and Marge in the mall". But there was one aspect of the show that Imagineering felt it needed to properly capture in the game, an iconic element of the cartoon that remains a recognisable portion of each episode. To the developer, it was imperative that the familiar intro scene that culminates in the family sitting around the TV was recreated properly, and it was around this idea that the first level was designed – the level that no doubt many remember the most. "We wanted to get in the skateboarding

that [Bart] did at the beginning of each episode in the intro, and we wanted to bring in there the character of Bart being what he was then, the little wise-guy, mischievous character. That was what we wanted to focus on and with the limited dialogue in there, that's what Fox wanted to focus on, too. We also wanted to focus on little bits of the show that people were familiar with, going to the payphone and doing a funny call to Moe's that, again, gives you something in the game but trying to work as much as we can from the [elements] in the show that made it famous."

This created some clear pieces of design for the first level, then, combining the storyline elements with gameplay mechanics that would fit in. For the former this meant utilising the x-ray goggles for Bart to safely spot the aliens and jump on them to collect letters to spell out a cameo character's name, while the latter allowed for puzzle elements to be included into the platformer, which was a fairly novel concept on the NES. In the first level this meant using Bart's cool, rebellious attitude to spray paint purple objects red, but extended further into having to solve other intricate ways of eliminating any purple within the stage. It blended the

BART DEBIGULATED
How Bart tried to take over your pocket

BART SIMPSON'S ESCAPE FROM CAMP DEADLY
GAME BOY, 1991
■ The first of the portable *Simpsons* games was a new title rather than a *Bart Vs The Space Mutants* spin-off, and the show based an episode on the game's plot a year later. However it isn't much cop, with poor controls and repetitive gameplay – a curse of most early Game Boy games, sadly.
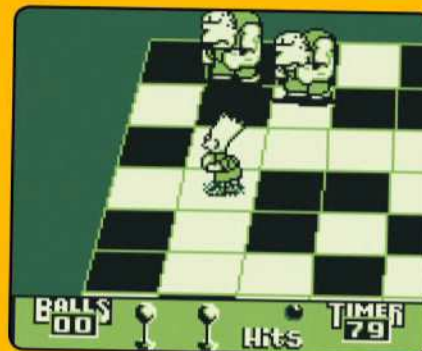
BART VS THE JUGGERNAUTS
GAME BOY, 1992
■ Putting a spin on things a little, *Bart Vs The Juggernauts* forwent 2D platforming – a saturated genre on the handheld console – and instead chose to use a variety of minigames under the guise of a TV competition not unlike *Gladiators*. It was an original idea, and is fun to play in short bursts.

BART & THE BEANSTALK
GAME BOY, 1994
■ After reverting back to platforming, *Bart & The Beanstalk* is a technically superior game to its predecessor *Camp Deadly* but still a drab and dull platformer. The idea isn't even original, taking a fairytale and just pasting in *Simpsons* characters as though that would be enough fan service.

"our goal was to continually delight the player with surprises, always incorporating the favourite aspects of the show"

Garry Kitchen

two core aspects of the game – platforming and puzzle-solving – seamlessly, inspired by the adventure games that Dan used to play. "I was a big player of a lot of the original text adventures," he says. "I had played the *Zork* series, I had written and published in 1980 before going to Activision two text adventures that were in the same vein as *Zork*. And those were text adventures on the Apple and the TRS-80 that had full sentence recognition, very involved. I think those kind of adventure games, where you could collect objects and inventory objects and keep them and use them kind of inspired the adventure aspect of the game." It was a clever idea, giving platforming stages a slower, more considered pacing that wasn't common at the time. It meant each stage had a different goal, too, starting with removing the colour purple through to collecting hats, destroying exit signs and finding hidden radioactive uranium rods.

This had the added bonus of adding a little bit of humour to proceedings, which everyone agreed was an important part of the franchise's brand. With the limitations of the hardware, however, and therefore much less in the way of dialogue, this was no easy feat. "We used dialogue when we could," recalls Garry, "because so much of the series' humour comes through in the brilliant voice acting. We were always conscious of building humour into the game experience whenever possible. We were careful to include the small details in the visuals to stay true to the show, such as Maggie sucking on her pacifier incessantly – even in the game interface - and the omnipresent blinking eyes on both the characters and, sometimes, the aliens." There were a bounty of references that could be made that would help to solidify the *Simpsons*-esque tone, including its raft of locations like the Kwik-E-Mart,

Homer's power plant workplace and the numerous secondary characters like Barney, Krusty The Clown and Sideshow Bob. "One of my favourites," smiles Garry, "is the visual of Sideshow Bob as the boss in level three and the humorous touch of Bart having to jump on his feet rather than his head. And I love the hilarious climactic ending of the game, using Maggie's pacifier in a special way." The deft use of the show's most recognisable scenes and characters was largely reliant on Barry Marx, Garry explains, who doubled as producer and writer for the game. "Our goal was to continually delight the player with surprises," he adds, "always incorporating the favourite aspects of the show."

S
o when it released in 1991, it was perhaps no surprise that the game was a smash-hit success, hitting the shelves at a critical point in the cartoon's life that it ultimate rode the wave. It wasn't just a critical success, however, but a commercial one too, and with the added glory of actually being a standout licensed title – a stigma the industry was still recoiling from thanks to overzealous publishers and the generation prior. As is often the case with these things, a sequel was practically inevitable. "This was in talks before but Acclaim didn't greenlight it until after there was success with *Bart Vs The Space Mutants*," says Dan. "And so they came to us, said we did really well and could they have a broader concept, a wider concept." The concept was born pretty quickly from there: why not have Bart taking on the whole world? It was a rather obvious choice for a sequel, too; having proven *The Simpsons* could work in videogames, moving on to turning the whole planet into Bart's playground would really help to encapsulate the spirit of the show. "The idea illuminated

in me the realisation that we could go to all sorts of very cool places," recalls Dan of the original meeting with Fox. "I said: 'Look out the window, we have a studio here, and you guys can take everyone around the world right here in your backlot, so let's do the same thing, let's do a level where Bart is literally walking across the animator's table and jumps into a sound stage and then he's in a pirate movie or China, various exotic places that I was trying to think would be fun to play."

The focus, then, was on making something that continued the strengths of *Bart Vs The Space Mutants*, leveraging the character of Bart in more entertaining, varied and different ways. This meant that while those puzzle elements did disappear, much more about the game was improved: the addition of Bartman, enhanced skateboarding sections, various minigames throughout; a lot was done to really enhance the experience provided by the original, building on issues that could be resolved. "We tried to make some of the levels ▶

» [NES] The team paid close attention to inserting in-jokes from the TV show into *Bart Vs The Space Mutants*.
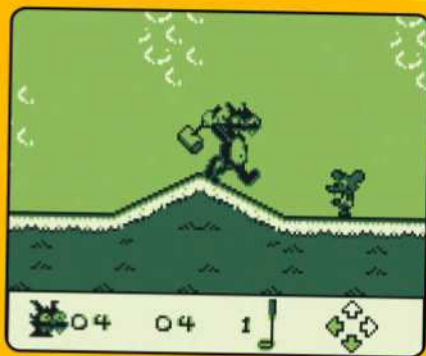
ITCHY & SCRATCHY IN MINIATURE GOLF MADNESS
GAME BOY, 1994

■ There is novelty in the combination of a golf game and an action platformer, even if there's no way of understanding how the concept was derived. It's functional in its mechanics and the violence of the Itchy & Scratchy show is retained, but it really does feel like two separate games stapled together.

NIGHT OF THE LIVING TREEHOUSE OF HORROR
GAME BOY COLOUR, 2001

■ *Night Of The Living Treehouse Of Horror* is the best platformer among its handheld brethren. It's exceptionally difficult, however, and doesn't change the gameplay enough to hold on to any interest.

ROAD RAGE
GAME BOY ADVANCE, 2003

■ This version was never going to compete with the console equivalent – which itself was a flawed copy of *Crazy Taxi* - but it managed to condense the experience into the smaller screen relatively well. It lost some of the charm that at least made the PS2 version appealing to *Simpsons* fans, though.

MMM, MORE SIMPSONS...

BART VS THE SPACE MUTANTS

■ It was the first, but also one of the best early *Simpsons* games. The NES games that followed didn't match the same quality and attention to the series that this did, and no other *Simpsons* game utilised the unique puzzle-solving elements of this debut title from Imagineering.

THE SIMPSONS ARCADE

■ If a game of this era wasn't a side-scrolling platformer then it was likely a beat-'em-up. But much like *Bart Vs The Space Mutants* this wasn't a lazy cash-in but a well-rounded arcade game from Konami. It was smooth, fast and paid close homage to *The Simpsons* franchise.

THE SIMPSONS HIT & RUN

■ Where *Road Rage* was a fun but lacking *Crazy Taxi* rip-off, *Hit & Run* was the obligatory *Grand Theft Auto* clone that was so popular on the PS2. However, the latter was a much better-quality title, and enabled players to properly head out into Springfield and explore for the first time.

THE SIMPSONS GAME

■ Though this was essentially a tie-in to *The Simpsons Movie*, it didn't suffer as such games usually do. It utilised the humour of the series well and even poked fun at many videogame cliches and tropes for added entertainment. The fact that it was a solid 3D platformer in its own right helps solidify it as a *Simpsons* classic.

THE SIMPSONS TAPPED OUT

■ *Tapped Out* is a freemium title in the vein of *Farmville* and other social city-building games. It still manages to leverage the brand well and in a fun way, and if we're defining 'essential' as a study of how a brand can be used across a broad spectrum, this is certainly one to at least try.

"We took the original code and tweaked Bart a bit, made him look a little different"

Dan Kitchen

▶ easier," says Dan, who laments that he didn't push back more on Fox's desire to make the original a longer game by increasing its difficulty. "We took the original code and tweaked Bart a bit, made him look a little different, not much different but better in many ways. We tweaked his physics, but we did want to retain the feel of Bart so that if you were used to the first game and how it responded to the controller then it wouldn't be too different. And also we wanted to improve some of the levels and the way they played, making sure we didn't have as far jumps, making sure we didn't have blind jumps, making sure you could move the camera and see where you were so you knew where to go."

Meanwhile, Fox's interest was piqued. Where the original had been created with a degree of freedom for Imagineering, the particulars of the sequel had much more input from Fox itself. The potential of tying a videogame to its new phenomenon was a clear opportunity, and it looked to release a game that had more to offer its fans. "They wanted it to be a much more fuller experience," explains Dan, "which is why we ended up adding in more of the characters as cameos and why we ended up putting in the interstitial map and then minigames." These minigames meant more tertiary characters could be brought into the game without having to struggle with the NES hardware to include more playable characters, which Fox at least accepted was a fair challenge. "It wasn't just good enough to have Bart visit another location and do the same," he adds. "We had to think: what can we give to the player that is *Simpsons*-themed, captures the personality of the show but gives them more than just the same?" This was where the idea to include trivia had come from, since it tapped into the audience's interest despite

» [NES] Bart narrowly evades a peg-legged pirate using a ladder, and he probably quips at the scoundrel to dine on his trunks.
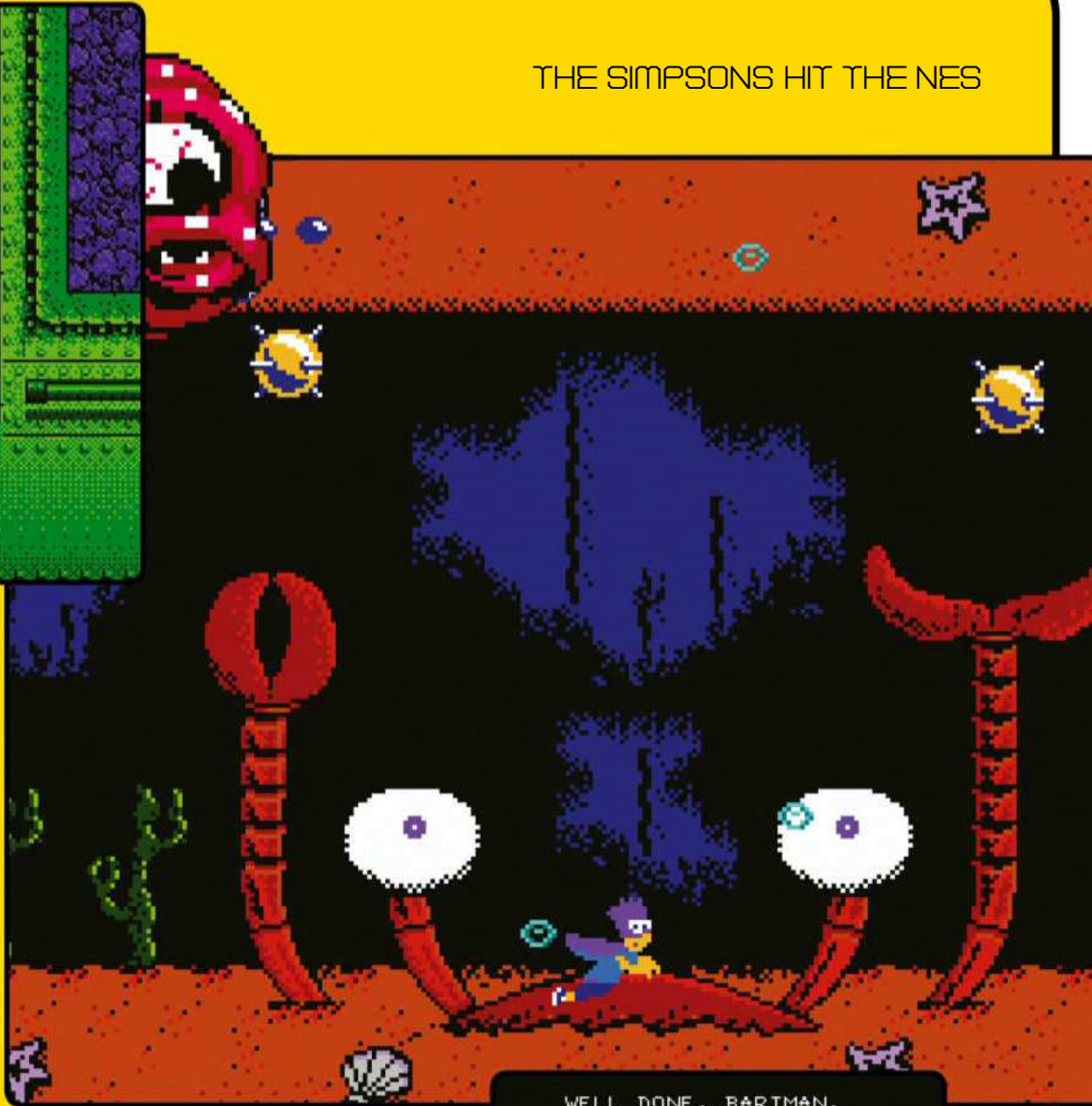
» [NES] Bartman stares off into the distance and wonders if this particular licence was a good idea or not.

there only being two seasons of the show at the time of the game's development. All this was crammed into a incredibly short development time, a short turnaround that meant *Bart Vs The World* would also release on the NES in the same year as its predecessor – a matter of months between the two.

At this point *The Simpsons* name was already a huge brand, its success and popularity rising with each new episode. Bartmania had run its course, bootleg T-shirts were a common sight and the show was really beginning to find its groove in terms of humour and style. But Acclaim and Fox had been bitten by the craze, with the former already looking to work with other developers on new *Simpsons* games – particularly with an eye for a new generation of consoles. Imagineering would have one last *Simpsons* game up its sleeve, *Bartman Meets Radioactive Man*, but the circumstances were different. Fox became far more involved with the process, particularly from a creative standpoint. "The opening sequences [of the show] are kind of little comic book panels," explains Dan of the original concept, "and Fox wanted a kind of feeling of Bart protecting the world from Radioactive Man. They also came to us and said, 'Look, we want more of the same with this one.'" Fox even had specific ideas for the sorts of places that the game should allow players to explore, and dictated the addition of the likes of an enchanted forest or underwater segments. As a result it was only the character of Bartman that tied the game to *The Simpsons* at all, otherwise the environments, enemies

» [NES] *Bartman* disposed of all the iconic Springfield imagery and went for something much more abstract.

and story was completely removed from the franchise. "It was really more of a fantasy," says Dan, "Bart's gone into a comic book and what things could we do that Radioactive Man had set up against him?"

Bartman Meets Radioactive Man was a major shift from the titles that came before it; sure, it was a 2D platformer, but far more generic and with only superfluous attention to the brand. It didn't have the puzzle elements of *Bart Vs The Space Mutants*, or the variety of *Bart Vs The World*, and was considerably harder. "Of course this one was all Bartman, so we had to build in levels with this in mind," continues Dan. "So, in traditional Mario levels it'd be no fun if you could put on a cape and fly over everything, so we had to make them more vertical, we had to put in things that would restrict him more. We couldn't just fly over everything, and so the challenge from that aspect was to make it fun but with different types of levels." The biggest shift was the focus on combat, with Bartman's melee and laser-shooting abilities giving the game a totally different approach than the previous titles. It released in December of 1992, and didn't fare too well critically. "Of course we felt pressure," says Garry. "And the pressure only got worse because when we first started the game it wasn't clear how popular the brand was going to become. As *The Simpsons* grew in popularity, the pressure grew as well." Imagineering's involvement, however, ended with Bart *Meets Radioactive Man*,

» [NES] Radioactive man opens a door in space and time to congratulate Bartman on his hard work.

» [NES] *Bart Vs The World* saw the eldest Simpson child visit famous landmarks from across the world.

at which point the well-loved family was well on the way to becoming the iconic piece of pop culture that it is today. That pressure certainly will have continued to grow over the years and is perhaps a key cause of the erratic rollercoaster of titles that the Simpson family have had to endure, covering the full spectrum of knockout smash hits to shameful duds. *The Simpsons* history with gaming is a long one, and as much a part of our consciousness as the TV shows themselves; in many ways the show's quality has its own parallels to videogame equivalents. Yet while Homer, Marge, Bart, Lisa and Maggie might not have always entertained at their very best, it's impossible to say that there isn't at least a soft spot in our hearts for *The Simpsons* when it comes to videogames. ✱

Ultimate Guide to Pengo

According to Sega, what's the biggest threat to penguins? It's not global warming or hungry leopard seals, no – it's those pesky ice-melting Sno-Bees. Only Pengo can stop them...

Words by Nick Thorpe

» [Arcade] Maze designs typically don't cluster many blocks together, allowing Pengo many opportunities to attack.

Penguins are excellent. We're pretty sure they're the best flightless birds, as they're less egotistical than peacocks and cuter than ostriches. Even kiwis can't compare. In fact, we're rather convinced that much of the UK's interest in maintaining sovereignty over the Falkland Islands is driven by the desire to have more penguins in British territory. So it's no surprise that penguins are a popular choice for videogame characters, and before the likes of Piplup, Overbite and Pentarou, Sega gave us Pengo.

Back in the early Eighties, Sega was a big name in arcade games, but wasn't the huge operation it would later become. As a result, it would often make use of subcontractors – for example, Ikegami Tsushinki worked on *Zaxxon* and *Congo Bongo*. For *Pengo*, Sega hired Coreland for the first time in what turned out to be a fruitful relationship – the companies would work together frequently up to 1986. Thanks to a hidden credits screen, we're able to properly identify the creative minds behind the game – director Nobuo Kodera, programmer Akira Nakakuma and designer Shinji Egi. A fourth staff member named Tsutomu Iwane is identified in the code, but no role is specified.

Much like *Dig Dug* earlier in 1982, *Pengo* is a maze game that breaks the conventions of the genre

» [Arcade] That red flashing block indicates the location of a egg that has yet to hatch.

by allowing the player to define the maze. The key difference is that where *Dig Dug* doesn't have a preset maze, *Pengo* does – but rearranging the maze is an inevitability, as it's *Pengo*'s primary means of attack as well as the enemy's most dangerous ability. In order to defeat the enemies – Sno-Bees – Pengo must push ice blocks, which slide along until they hit an obstacle and wipe out anything in their path. However, the Sno-Bees can also destroy ice blocks at the cost of a little speed, leaving *Pengo* with fewer places to hide and fewer opportunities to attack. What's more, Sno-Bee eggs are actually hidden in some ice blocks, waiting to hatch when their buddies get iced. When all of the Sno-Bees are defeated, or the last one flees from battle, *Pengo* can move on to the next level.

What made *Pengo* stand out in the arcade was its excellent presentation. The titular character was a rather cute creation – as well as being well animated as he darted about the screen, he was a delight to watch when tripping up on his way out of a stage, or even when he was caught by the Sno-Bees. An animated introduction sequence showed off *Pengo* and his friends being chased around by the enemies, and every couple of stages you would see a short intermission, comprised of colourful penguins briefly dancing to *Ode To Joy.*

▶

Conversion Capers

ATARI 2600
1983
■ Considering the limitations of the console, this is a remarkably full-featured conversion. The playfield has been rotated to fit horizontal TVs and uses an 11x8 block maze, but all the game mechanics are present and correct. The intermissions don't make it, but a rendition of the in-game music does.

ATARI 5200
1983
■ This version uses a 12x10 block maze rather than the arcade's 13x15 layout, and generally plays out at a slower speed, but is otherwise faithful in terms of scoring and mechanics. The theme is pretty catchy here, too. As with the other Atari versions, intermission scenes and the intro were cut for space.

ATARI 8-BIT
1983
■ The Atari 8-bit version is almost identical to the Atari 5200 version, which you might expect if you're aware of the technological similarities between the platforms. The music on offer isn't quite as rich here, but we will take that hit if it means not having to use the atrocious Atari 5200 joystick.

GAME GEAR
1990
■ This pocket-sized *Pengo* experience is a nifty little version. In order to fit the entire playfield on the small display, the game uses small block graphics with larger sprites for *Pengo* and the Sno-Bees. The Japanese release uses Popcorn, and the European cartridge uses the original theme from the later arcade release.

MEGA DRIVE
1995
■ Included on *Pepenga Pengo*, this version was the first to come close to arcade perfection. It initially appears to use the arcade graphics, but closer inspection shows that they are in fact just very close redrawn versions, and *Popcorn* isn't used. Unfortunately, there's no option to choose a non-scrolling playfield.

SATURN
1997
■ Released as part of *Sega Ages Memorial Selection Volume 1*, this is the closest home conversion of *Pengo*. It uses the Mega Drive graphics rather than the original arcade sprites, but offers the choice of a regular mode with slightly smaller graphics or a vertical monitor mode for a more authentic experience.

Icy What You Did There

Want to rack up the points in Pengo? Here are five important bits of advice…

COMBO CRUSH

■ If you ever get the opportunity to squash more than one Sno-Bee at a time, take it – your score will go through the roof. One Sno-Bee is worth 400 points, two will earn you 1,600, bagging three will net you 3,200, and taking out four rewards you with a whopping 6,400 points.

BREAK SOME EGGS

■ Every so often, the game will flash a few ice blocks to show the location of the *Sno-Bee* eggs. Remember these, and if you're nearby, break the blocks. Not only do you score an easy victory, you also get 500 points instead of the 400 you'd get for squashing an active *Sno-Bee*.
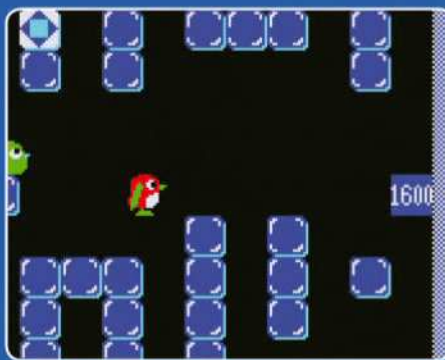
DIAMONDS ARE FOREVER

■ As well as being valuable for their indestructible properties, diamond blocks award serious bonuses if connected – 5,000 points if all are touching the walls, and 10,000 if at least one isn't. This also stuns all of the Sno-Bees in the playing field, allowing further point-scoring opportunities.

Q&A: W Sean Hennessy

A look back at the coding of the Atari 8-bit and Atari 5200 versions of Pengo

Had you played *Pengo* before you got the job of converting the game?
I do not recall if I'd played the title beforehand. We regularly went out on gameplay safaris to the local arcades. The title was assigned/offered soon after we shipped *RealSports Tennis*. I seldom refused any task George [Kiss] asked me to take on – I like to think that's why he offered me a place at Atari and again at BlueSky.

What did you think of the arcade game?
It mimics other successful coin-op gameplay, for example *Pac-Man*. It was cute and appealed to the demographic of the home console.

» A younger Sean Hennessy striking a pose.

How long did the conversion take?
I think between four to six months. I figure 20 per cent of the *Tennis* core code was reused, refined or reworked to accommodate *Pengo*. The test cycle between first playable and product release probably took a month.

What materials were you given to assist in creating the conversion?
The coin-op sat with other games in the arcade at 275 Gibraltar, and I had a thick binder print out of the source code (Z80, not 6502).

Did you face any memorable challenges when programming *Pengo*?
Yes. Firstly, for a coin-op conversion the aspect ratio of the display is 90 degrees off. Look at the arcade orientation versus home TV. Those pixels on the TV are not square. It plays hell with getting the images size and the corresponding relative velocities to match. We wanted it to feel the same as coin-op.

Secondly, not to be lured by original source code listing. Arcade coin-ops were predominantly custom built hardware. Seldom were the architectures even close cousins. The CPU and display chipset were different. The firmware interfaces to audio, controllers, and display were of no use. So the source code was a good reference for the actor logic, but not much else. We had to be clever about how things were implemented on our resource constrained console.

Were there any features you that were proud of?
Of course we were proud as a team to ship as close as possible representation of the Sega original. Mimi Rogers (art) did her typical awesome job on the character conversions. Andy Fuchs (audio) delivered the goods. Mind you, I think Andy did the audio for *every* title that came out of 275. Getting your project on top of the art, audio or testing department list of all things to work on required some tact.

One contemporary magazine review complained about the lack of the arcade game's introduction sequence. Can you remember why it wasn't included?
Bear in mind that the home console is a different venue than that of the arcade. The raison d'etre of the coin-op arcade environment is all about quarters. Every unit in the arcade is screaming for the player's attention with introduction that serve little purpose in the home environment. That, and available space was final argument for all things left out.

How did you feel about the finished conversion of *Pengo*?
It was the third 5200 title in roughly two years for me. I was glad to be able to deliver on George's goal to support the 5200/800 with titles. Conversions were part of the job and I was pleased to do my bit.
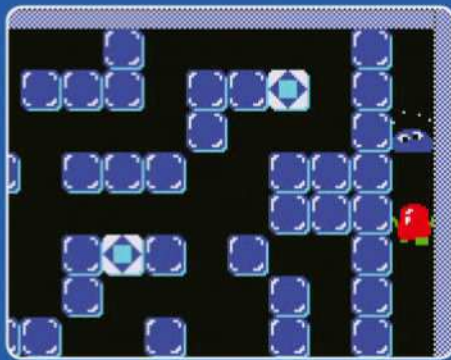
STONE COLD STUNNER

■ If you're by a wall, kicking it will stun any Sno-Bees that happen to be adjacent to the same wall. Although you can now defeat them simply by walking over them, that only earns 100 points – if you're by an ice block, you can still claim the full 400 for crushing a stunned Sno-Bee.

GAME TIME	MIN.33 SEC.
FROM 00 TO 19	.5000 PTS.
FROM 20 TO 29	.2000 PTS.
FROM 30 TO 39	.1000 PTS.
FROM 40 TO 49	..500 PTS.
FROM 50 TO 59	...10 PTS.
60 AND OVER	NO BONUS.

AN ICE TIME

■ Try to complete levels as quickly as possible – doing it in under a minute will bag you a measly ten bonus points, but if you can do it in under 50 seconds the rewards are much better. Manage a miraculous time of less than 20 seconds and you'll get a massive 5,000 point jackpot.

400 HI 20000 2P   0

> "I figure 20 per cent of the Tennis core code was reused, refined or reworked to accommodate Pengo"
>
> Sean Hennessy

ACT 1   © SEGA 1982

» [Arcade] Narrow misses are common in *Pengo*, especially when Sno-Bees start smashing through the ice.

▶ Speaking of music, *Pengo* is famous for including a rendition of Gershon Kingsley's famously catchy electronic track *Popcorn*. However, not all versions use this – some arcade boards use an original track, while some of the home conversions use *Popcorn* and others don't. Many people believe that the reason for the change was that the music was unlicensed, but Japanese accounts suggest that it was used with permission, evidenced by a JASRAC (Japanese Society For Rights Of Authors, Composers And Publishers) seal affixed to instruction cards to show that the music was used legitimately. This is why most of the later Japanese home releases continued to use *Popcorn*, while all export versions use the alternative tune. So if you remember *Popcorn* being used in *Pengo*, chances are you were playing either an imported board or a bootleg!

When *Pengo* was unveiled in 1982, *Computer & Video Games* was effusive in its praise. Before even finishing the introduction to its coverage of the game, the magazine had declared, "Four lucky members of the *C&VG* team have so far tried out this cutest of coin-operated video games and their verdict is unanimous… *Pengo* is the *C&VG* tip for 1983." Assessing the game as a whole, the author wrote, "*Pengo* is a game apart, with wonderful graphics,

delightful characterisation, plenty of scope to work out your own tactics and a catchy melody."

However, *Pengo* was only a moderate success in arcades. For western markets, Atari picked up the rights to produce home conversions. Good versions were produced for the Atari 2600, Atari 5200 and Atari 8-bit computer range. In a review of the computer version, *Computer & Video Games* awarded scores of 9/10 for getting started, 8/10 for graphics, 4/10 for value and 7/10 for playability. The reviewer was perplexed by the lack of intermission screens ("Wot no dancing penguins?") and commented that the conversion "generally plays an arcade-authentic game of *Pengo*," but was "a bit pricey at £24.95." Owners of non-Atari machines weren't left out though, as many unofficial clones were sold for a variety of computers.

In Japan, Sega didn't convert the game for the SG-1000, and the home computer market was left to purveyors of clones once again. By the time Sega chose to create an official version as a launch game for the Game Gear in 1990, the game was already considered retro. It has delivered a couple of updated takes on the formula, though. *Pepenga Pengo* was a major reworking, with new block behaviour, boss

battles and more. When it arrived in 1995, it became Sega's final first-party Mega Drive game in Japan. *Pengo!* (distinguished from the original by that exclamation mark) was a Japan-only arcade game first sighted in 2010, with a huge playfield and support for up to eight players, reduced to four in the Xbox 360 conversion, *Ge-Sen Love: Plus Pengo!*).

Pengo isn't one of Sega's major characters, nor one of the very brightest stars of the early Eighties arcade scene. However, there's still a lot of fun to be had with the game in all of its incarnations, so if you haven't revisited it in a while or you're new to its charms, it's well worth giving it a play some time soon. After all, penguins are nothing short of excellent. What could go wrong? ✱

Amiga CD32

» **YEAR:** 1993
» **MANUFACTURER:** Commodore
» **COST:** £250 (launch), £150+ (today)

When the first AGA (Advanced Graphics Architecture) Amiga computers launched in 1992, Commodore realised it had a pretty solid gaming platform on its hands – it could comfortably claim to offer more than Sega or Nintendo.** So for the third and final time, Commodore would attempt to enter the console market. Unlike the Commodore 64 Games System, the hardware wasn't outdated, and unlike the CDTV the price was reasonably affordable to the mass market. With a newly designed joypad and a (relatively) compact grey case, it looked to be a viable contender.

The system launched to a solid reception in Europe in September 1993 and quickly amassed a large software library, though the bulk of this was comprised of legacy Amiga games ported to CD for a quick profit. Although the console dominated UK CD software sales during its short life, overtaking PC CD-ROM and Mega-CD game sales, it wasn't enough to save Commodore. The company went bankrupt in 1994 and with nobody to manufacture or advertise new units, the CD32 faded into irrelevance. When Escom purchased Commodore and the Amiga technology later that year, it declined to support the CD32 – a sensible move, given the impending arrival of the PlayStation and Saturn. ✱

Amiga CD32 fact

■ Although not designed for expansion into a full computer, third-party peripherals exist that allow the connection of a hard disk drive, floppy disk drive, keyboard and other accessories needed for the equivalent function of an Amiga 1200.

PROCESSOR:	32-BIT MOTOROLA 68EC020 CPU (14MHZ)
RAM:	2MB MAIN MEMORY
GRAPHICS:	AMIGA ADVANCED GRAPHICS ARCHITECTURE (256 COLOURS INDEXED MODE, 262,144 HOLD-AND-MODIFY MODE, FROM A PALETTE OF 16.7 MILLION, 320X256 RESOLUTION)
AUDIO:	4X 8-BIT PCM CHANNELS
OPERATING SYSTEM:	AMIGAOS 3.1 (1MB ROM)
MEDIA:	CD-ROM (UP TO 650MB)
STORAGE:	1KB EEPROM

The Making Of

AVALON

and

Dragontorc

Having enjoyed great success with his Seiddab trilogy, Steve Turner turned his talents to a new, more ambitious type of game. We visit the famous Spectrum developer to learn more about these two very legendary games

Words by Graeme Mason

T he *Seiddab* games had proved to be fruitful for developer Graftgold and publisher Hewson throughout 1983 and early 1984. Shoot-'em-ups, together with platform games, were still the go-to genre for publishers, and we once more sit opposite *Seiddab*'s creator, Steve Turner, his living room no less cosy than when we chatted about Graftgold a few months ago. "I noticed in the magazines, especially *Crash*, that the phrase 'not another shoot-'em-up' appeared a lot," he begins. "They were selling, but quickly going

out of favour with the press." Steve correctly identifies that *Crash* and its peers, were key influencers upon the Spectrum's audience; if the mags were getting tired of shooting games, it was a fair chance Speccy fans were too. "Those games were like hit singles. I wanted to do something that was the equivalent of an LP, something that would last longer than five minutes, and that people would want to go back and play again and again."

Several influences converged at this point, all of them contributing towards the idea that would become *Avalon*. "I used to play a *Dungeons & Dragons*-type game called *Runequest* with Andrew [Braybrook] and some friends," continues Steve. "That got me thinking that a similar thing would be great on a computer." For the technical aspect, the coder noted Ultimate's *Atic Atac* and its clean, top-down perspective walls. "That taught me that you didn't need a full backdrop, just lines, to suggest depth. So I experimented with some drawings to make a display a bit like a theatre, a 3D look without it actually being full 3D." The third influence informed *Avalon*'s storyline. A keen fan of history, Steve drew upon his current reading material, Geoffrey Ashe's take on ancient British legends, specifically the author's first book, *King Arthur's Avalon: The Story Of Glastonbury*. "I thought it would be good to put the *D&D* thing into a myth

» [ZX Spectrum] *Avalon* made the best use it could of the ZX Spectrum's limited colours.

The Isle of Avalon showing the Citadel of Chaos — Realm of Avelach — Lord of Chaos

everybody knows, and was also aware that if you could put a recognisable name in, it could become a lot more popular."

Dipping into the Arthurian legends reveals a list of notable events associated with the Isle Of Avalon. Steve explains, "The area has always been associated with myth, so I thought it would make a superb setting." Considered to be the area where Arthur recovered after the battle of Camlann and also the birthplace of Excalibur, the developer created a story tied into the legends, with a sizeable dab of his own fertile imagination. "I tried to key in as much as I could to real places, creating the illusion of reality, even through fantasy. I invented this story of the wizards of the age having a battle with the lord of dark forces, all going on underground before the area is sealed off." The player must revisit the scene of the battle as the evil lord once more threatens the land. "I got the idea from Tolkien, because he created what seemed a real world, and it had a history, and then hints of history." Furthermore, in Geoffrey Ashe's book, the top of a staff is discovered in the excavated hill. Steve used this as a basis for the staff which *Avalon*'s wizard, named Maroc, carries around. "Maroc was the character invented for my son, Mark, when he used to attend our *D&D* sessions, aged two or three at the time. He had his own character, a mage, so I thought I might as well use that." Maroc, a gatherer of knowledge of the old ways, is accosted by an old woman sometime in the year 408AD. The Roman Empire is fleeing and barbarian hordes are on the cusp of invading. But it's the Lord Of Chaos who presents the biggest danger to the land, and it appears Maroc is the only one who can stop him. One night, the mage makes his way to the Isle Of Avalon, and prepares to battle the forces of evil. Through the Caverns Of Doom, Goblin Warren and Catacombs Of The Dead, Maroc must venture, before the final confrontation with the Lord Of Chaos himself.

With an idea for *Avalon*'s display, Steve began to create sample screens and devise gameplay. "I thought about all the kind of things I could do with the game, like pick up objects, put objects on other objects, use magic, hide things and so on. And I had to invent a way of getting it all into 48k." Achieving *Avalon*'s desired screen view, a pseudo-3D effect, was Steve's first task. "I'd had a border around a couple of my previous games, a console around the space ship, and wanted to keep that because it gave a sense of depth, narrowed down the area you had to plot, and reduced what you had to move around the screen." Steve took the panels from his *Seiddab* games and adapted them for the new scenario, before working out what was going to take place inside the border. "I started out on paper," he divulges, opening a folder and revealing a glorious spread of 35-year-old drawings. "And drew a Spectrum-sized screen, cut it out from blank paper, and drew scenes on another piece of ▶

» [ZX Spectrum] The theatre-style display was broken up with the occasional vertically scrolling scene.

paper, moving them behind so I could see what it looked like. It was a good way of getting an idea of the scale, and I needed fixed angles so I could use the same graphics over and over again." Now the theatre comparison came to the fore as Steve realised that they usually contained two sides, set at an angle, with a suitable backdrop panel. "I thought that would work, graphics side and back. I had the horizon from *Lunattack* made out of a line of sprites, so started out with that, which became the back of the room." Next came a small segment of bricks to fortify the illusion of a wall, along with diagonals and corners. "And that scrolled around pretty well, so I added more substance, such as the higher corners of the room. You don't need a lot to have the illusion, and I did this all first as I knew if it didn't work I'd have to rethink the whole game again."

Avalon's central graphic, Maroc the wizard, was the first major problem that presented itself. "I needed him to be quite big, and realised that if I started animating a walking wizard, I was going to run out of graphics fast." Steve's logical solution, considering Maroc's profession, was to have the

» [ZX Spectrum] Enemies frequently ganged up on Maroc, pursuing him from room to room.

> "I thought it would be good to put the D&D thing into a myth everybody know"

Steve Turner

character fly. "But I still needed to animate him in eight directions, so bought some plasticine and made a little wizard model. Then I sketched him from eight directions, and got that into the game in a standard sprite routine." At this point, *Avalon* began to form for definite as Steve admired the solid, yet swift way in which the hero moved. "He'd rise up from the floor, and then settle down. So I needed a shadow in order to enforce this, which Hewson called a flying carpet!" Keen to emphasise his LP-rather-than-single tenet, he created a relatively huge amount of objectives and task for the player to compete, and set them all within a gargantuan map of 255 screens. "After the game's release, a magazine demanded a solution. I said, 'Not yet! Give it time!'" laughs Steve. "They were expecting a list of about ten things the player had to do, but it was pages and pages long for *Avalon*."

Work proceeded efficiently on *Avalon*; both Steve and Andrew Braybrook had a background in programming before writing games, and this gave them an edge in the early days of the Spectrum and Commodore 64. "There was no assembler back then, it was all keyed in [using] REM statements," remembers Steve. "The actual code was hex as well, I'd write it on squared paper, the code down one side and down the other I'd hand-assemble it into hex. Then I had a hex autoloader, which

Ancient Britain Five more games of yore

ROBIN OF THE WOOD
1985

■ Riding through the glen to rob the poor and give to the rich. Sorry, that was another Robin. Spin that around. Noble brave Sir Robin, running around a beautiful verdant 8-bit maze, offing the minions of the Sheriff of Nottingham in his quest to acquire the silver arrow.

CAMELOT WARRIORS
1986

■ Developed by Dinamic, those lords of the rock-hard, *Camelot* Warriors thrusts the player into the middle ages in search of items that have entered this world from the modern day. Pick each one up, give it to a guardian, and it's job done. Easy, eh? NB: it's not easy.

DEFENDER OF THE CROWN
1986

■ With England's king dead and the country in chaos, it is up to a chosen Saxon hero to hold off the threat of those dastardly French. Jousting, castles and damsels in distress, all the fun of the twelfth century is here, with the added bonus of no deadly infectious diseases.

» [ZX Spectrum] Despite accusations of similarity to its predecessor, *Dragontorc* actually contains new graphics, including this atmospheric take on Stonehenge.

I'd written myself, which changed the hex into assembler. It allowed me to put labels in, which was a godsend, so I could identify the code using a key." *Avalon* was taking shape, and it was clear to its creator that nothing like it had been seen on the Spectrum. "I felt the player needed to feel where they were and interact with things. I thought this was new territory, and was sure it would work."

With his demo ready, Steve visited Hewson, confident Andrew Hewson, would like what he had to show him. "I had a wizard and three rooms, with doors, walls and a sample object you could open, which was also the wizard as I didn't have any other graphics." Fortunately it was enough for the publisher to appreciate this was going to be something special. Continues Steve, "I then made a mock-up of a level with a few more graphics that he could show the press, at the same time twisting his arm to get more royalties." Steve's first game, *3D Space Wars*, had taken six weeks from start to finish; its sequel double that, and then double again for *3D Lunattack*. Also the developer considered his efforts and the potential game to be worthy of an impressive box akin to the products from Ultimate. "It was a way to avoid piracy," explains Steve, "by making people want to own the whole package, give better perceived value for money." Hewson's choice of soft clamshell case was a halfway ▶

DEVELOPER HIGHLIGHTS

3D SEIDDAB ATTACK
SYSTEM: ZX SPECTRUM
YEAR: 1983

QUAZATRON
SYSTEM: ZX SPECTRUM
YEAR: 1986

RANARAMA (PICTURED)
SYSTEM: ZX SPECTRUM, AMSTRAD, COMMODORE 64
YEAR: 1987

LORDS OF THE REALM
1994
■ A century after the events of *Defender of The Crown*, another king has snuffed it, and there's a war of attrition ensuing to see who succeeds him. A strategy game of not inconsiderable quality or complexity from British developer Impressions, there have been two sequels since.

MEDIEVAL: TOTAL WAR
2002
■ Creative Assembly's second *Total War* game shifted the action from feudal Japan to medieval Europe, of which England was a playable dynasty. Now at last you could lay waste to entire regions of Europe, and pause for a nice cup of tea whenever things got a bit too hectic.

Piracy Prevention
How the Spectrum combated piracy

LENSLOK

■ Ah, Lenslok. The optical input challenge that required perfect 20/20 vision, a finely-tuned in television and an Olympic level of dexterity. First bundled with the renowned *Elite*, Lenslok was used with a number of high-end products. Unfortunately, frustration from genuine users meant it never stood a chance, and pirates cracked it easily anyway.

SPEEDLOCK

■ There were quite a few different types of loaders for the Spectrum, and most of them were designed with fooling professional pirates in mind. Created by David Looker and David Aubrey-Jones, this fast loader disrupted and locked up any disassembler that was running beside it. Critically, however, it didn't work against Multiface devices.

COLOUR CODE CHART

■ Included with smash hit *Jet Set Willy* was a small sheet of coloured squares. Upon loading, the player had to type in the correct colour from the reference requested otherwise the game crashed. This was another early innovation that largely enjoyed success until enterprising playground pirates simply copied the chart.

POWERLOAD

■ First utilised by Incentive Software, the Powerload was another loader that sought to disrupt local dissemblers and prevent hacking and copying software. Again, it was used with a high-end products such as the Graphic Adventure Creator, it was also highly susceptible to the wiles of *Romantic Robot*'s Multiface peripheral.

HARDWARE ADD-ON

■ Of course, the best way of combating piracy was to include a piece of hardware that you needed in order to make the game work. The most famous example was Mikro-Gen's *Shadow Of The Unicorn*, which came with the Mikro-plus expansion pack. Unfortunately the game was distinctly average, and poor sales virtually bankrupted the software house.

Exploration Nation

8-bit games with huge maps

TANTALUS

■ After his first game, *Strontium Dog: The Killing*, coder Paul Hargreaves cemented his reputation with this maze game. As one of four mutants attempting to assassinate a crime lord, *Tantalus* encompasses an eye-watering 1024 screens according to reviews, and, as you might expect, many of them looked very similar.

NONTERRAQUEOUS

■ Another mooted 1,000-plus screen game, this budget release offered outstanding value for money, if nothing else. Ruled by an evil computer, an alien planet have decided to construct a robot to seek out and destroy the tinpot terror. Naturally, that's where you come in, and there's a world of traipsing around *extremely* similar screens awaiting you.

FIRELORD

■ By the time of *Firelord*, programmer Steve Crow had already produced two maze classics in Bubble Bus Software's *Wizard's Lair* and *Starquake*. Playing the gallant knight, Sir Galaheart, there are 500 screens of bucolic medieval England to explore, fire ghosts to zap and locals to trade with or steal from. Graphically beautiful, and maddeningly huge, *Firelord* is another mapper's paradise.

UNDERWURLDE

■ After *Knight Lore*, many saw *Underwurlde* as a step back for Ultimate. In fact, it was an ace game in its own right, and scored a deserved Smash from *Crash* back in late 1984. Continuing the story of the Sabreman, the game features 52 levels with over five hundred screens in total.

EXPLORER

■ This is it. This is the big one. Advertised heavily on the back of its screen count, *Explorer* boasted an incredible 40 million-plus locations, although in essence they were identical save the odd building or pile of rocks. Using a procedurally generated system and limiting the amount of data stored in RAM, *Explorer* is a technical achievement, for sure, but not much of a game.
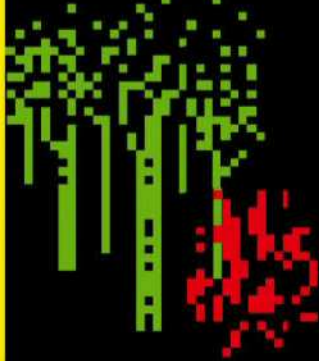
▶ compromise, and a (supposedly) photocopier-proof code sheet was included to piracy-protect the game. The package was rounded off with a poem and map, both printed on parchment-style paper, and created by Steve himself.

While graphically impressive, it was under the hood where the magic of *Avalon* really takes place. Even in noted games such as the aforementioned *Atic Atac*, enemies would be generated randomly within each room the player entered. "I wanted to make the meanies dangerous and semi-intelligent," says Steve, "And also for them to be grounded in proper physics, to make it as real as I could." Maroc would start *Avalon* only able to use his move spell. The theory was for the player to learn about controlling the wizard before collecting the fire spell that meant they could at least fight back. Helpful, as fleeing, was not always a successful solution. "I designed the meanies to follow you," smiles Steve, "so if you went into another room, they'd soon reappear. In order to lose them, you needed to put more than one room between you and them." These little complexities are what bring *Avalon* alive, and each had to be programmed efficiently. "I had a set of movement patterns for each creature depending on how it felt," recalls Steve. "If they were dressed in armour and powerful, they'd be bold. Others kept their distance until you approached. Many would flee, especially if you cast a spell." Unable to code specific routines due to memory restrictions, Steve used a stack of eight random numbers that drove the enemy movements, in a cycle that changed every fifth of a second. Playing around with these numbers gave Steve an impressive-looking range of movements

» Lots of classic games came with lovely stylised maps that helped pull you into the game world and Graftgold's *Dragontorc* was no exception.
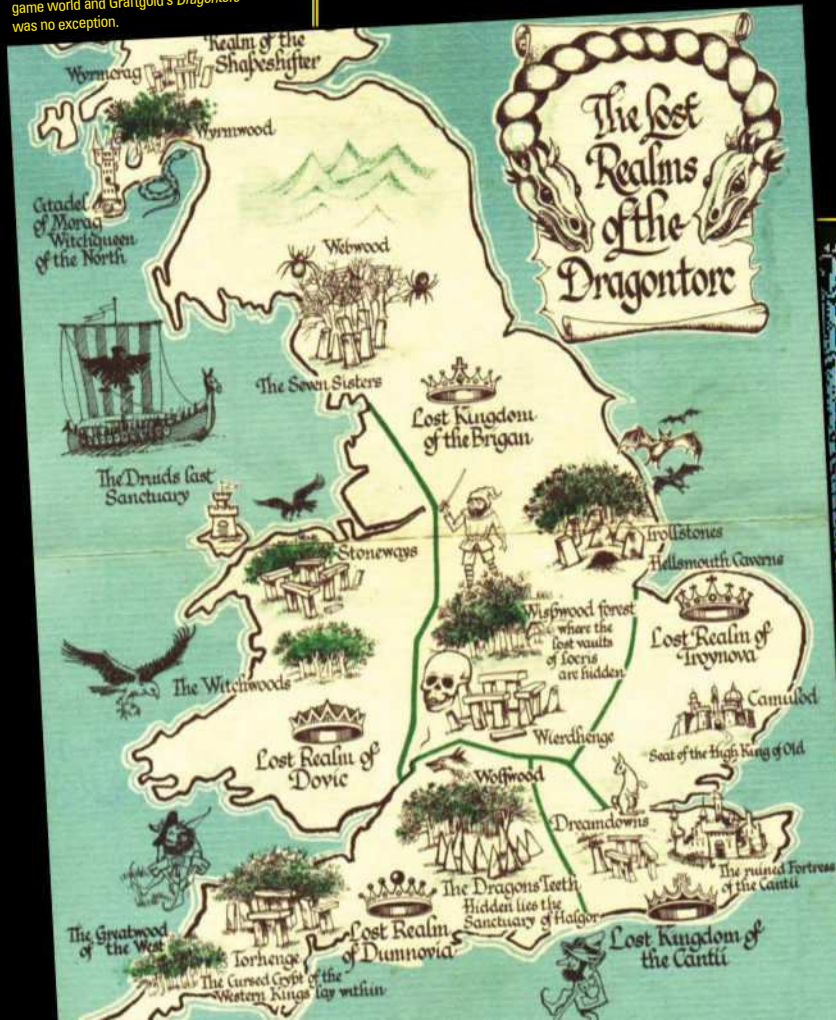
"I wanted to make the meanies dangerous and semi-intelligent"

Steve Turner

that were varied enough to make the player feel they were being stalked, avoided or attacked.

Given the level of commitment and time invested in *Avalon*, it was Graftgold's plan to create a series of games based around its base engine. *Dragontorc* followed a year later, but it was no mere update. "I was thinking constantly of what more I could do with the game, but didn't want to replace all the systems, just lift them a little bit," explains Steve. Into the sequel came more spells, greater variety of enemies and afflictions such as poison and blindness. "The races in the game would also act differently, depending on how you behaved towards them. For example, elves were apathetic unless you gave them a gem or a bow, then they'd follow and kill your enemies for you." This becomes a useful tactic toward the end of the game where invisible opponents plague Maroc. Steve devised another plot for the sequel, once more based in ancient Britain, this time imperiled by a witch known as Morag the shapeshifter. "I worked out the prehistory better this time," says Steve, "which gave me all the artefacts you needed to try and complete the adventure. I pieced it all together and wrote the poem. I was learning to link it all up better." The developer had also analysed what gamers found frustrating about *Avalon*. "There were more spells available from the start; I also made the door frames bigger as

» [ZX Spectrum] Arriving in the mystical woods in *Dragontorc*.

people struggled getting through them." Despite these improvements, *Dragontorc* failed to improve on its predecessor's sales. "It was similar to what happened to Gargoyle and its fantasy trilogy," notes Steve. "They did two games and then sales dropped off. A lot of big sci-fi movies were out, so we, like they, shifted to a space theme." While Gargoyle created *Marsport*, Steve produced the brilliant space adventure *Astroclone*. However, he didn't forget about his magical trilogy. "At that point it never got much past the initial idea," he remembers, "but with the advent of the 16-bits I did try and resurrect it. It had to be completely different in order to avoid copyright problems with Hewson, and we put a prototype together." The game, *Dragonwrath*, was based around a young King Arthur, and picked up by publisher Warners, impressed with its multi-layered parallax graphics. "No one else understood it," laments Steve. "Everyone just wanted polygons, while we had a preprocessed room with these graphics you could move between." Alas, three months in the publisher got cold feet and pulled the plug.

But no matter; for leaving an indelible mark on ZX Spectrum games history, Steve Turner can be proud. His technical skills ensured classic status for both *Avalon* and *Dragontorc*. "We believed in framerate for playability," he concludes, "And an instantaneous warp between rooms, as loading spoiled the flow. You do it so the data is of a format that can be picked up quickly. It was one of my trademarks." After *Astroclone*, fancying a change, Steve had a crack at isometric games with *Quazatron*. But it's his brace of arcade adventures that he recalls most fondly. "No other arcade games of the time had the same depth," he reminisces. "And the interesting thing was it never just dropped off the sales charts . It seemed that when people started playing it, they continued to play it – which is exactly what I wanted them to do." ✱

» Hewson's advertising at the time made it quite clear you were getting value for money.

» [ZX Spectrum] As with *Avalon*, failure in *Dragontorc* produces this withering announcement.

THE MAKING OF DONKEY KONG COUNTRY 2

DIDDY'S KONG QUEST

ALTHOUGH THE MASSIVE SUCCESS OF DONKEY KONG COUNTRY MADE A SEQUEL AN INEVITABILITY, GREGG MAYLES REVEALS HOW A BIGGER, BETTER FOLLOW-UP HAD ALWAYS BEEN PART OF THE PLAN

Words by Rory Milne

Given that Rare's *Donkey Kong Country* was the fastest-selling game of 1994, it might be reasonable to assume that pressure would have been applied on the developer by its publisher Nintendo to rapidly produce a sequel. But as Rare's Gregg Mayles explains, the push to develop *Donkey Kong Country 2* was entirely internal. "I think the pressure was on ourselves," Gregg reflects. "We had started on *DKC 2* before we realised just how successful the first one was – everything happened so fast. We always knew there were things we didn't have time to do in the first one that we would like to do in a second one, so we started thinking about it, and then as soon as the first one became successful it became a formality."

The thoughts for Rare's sequel began with consideration of the environments that the game could take place in, which required Gregg's team to think outside the box and create something different. "Similar to the first game, we just sat down and thought about themes for worlds," Gregg recalls, "and I guess we had exhausted all the obvious ones in the first game: the jungle, the caves, the mines and the forest. So the backgrounds and the worlds in the second one were a little bit more out there. That's where the 'hive' level and the 'bramble' level and all the edgier stuff came from – and the pirate stuff."

As well as providing inspiration for level themes, pirates also defined the overall narrative that the *DKC 2* team created for their follow-up. "I've had an almost life-long interest in pirates," Gregg enthuses. "I think they're a fascinating bunch of characters. I guess pirates have always been painted as

» Gregg is still at Rare today, currently he's sailing the high seas, working on *Sea Of Thieves*.

» [SNES] Diddy deftly lobs an explosive barrel to make short work of a foe.

"THE TEAM WAS VERY YOUNG – I WAS PROBABLY 23 AT THE TIME"

Gregg Mayles

» [SNES] Krow's weakness is eggs; as long as you've got one he'll take damage when he attacks.

freespirited people that did their own thing, which masks the truth that they were probably a bunch of scumbags! *Donkey Kong Country* was very 'jungle-y' themed – when you think of gorillas and monkeys you think of jungles, so it was the obvious thing to go to. For the second one we wanted to do something a bit different, and I guess just because we liked pirates it became an easy choice."

Having dreamt up locations for their pirate platformer, Gregg and his team next took a decidedly analogue approach to populating those locations. "We would have a board with all these Post-it notes with ideas for levels, where there was, like, tyres that you bounced on or a thing that was chasing you," Gregg notes. "So the levels all started off life as ideas, and then when we had chosen the ideas we decided which world

they fitted in. We almost certainly had some ideas that we carried over from *Donkey Kong Country*, but certainly not levels; they were all brand new."

Another fresh aspect of *Donkey Kong Country 2* was a new player character called Dixie Kong, whose inclusion required Donkey Kong to sit out his own sequel. "The team was very young – I was probably 23 at the time," Gregg points out, "and I think when you're that young you're prepared to take risks. We wanted to do something that would surprise people. The gameplay was set, but we wanted to introduce a new character, so we were either going to have to take Diddy out or take the braver, bolder step of taking *Donkey Kong* out. It worked out okay. I think otherwise we would have got a bit of a roasting from the marketing people!"

An unintended side-benefit of Dixie's introduction was that her ponytail could double as a whip or a helicopter blade, but the character's gender wasn't influenced by the pros of long hair or a push for female representation. "I think we decided it was going to be a female character before the hair; the hair didn't lead the decision," Gregg clarifies. "And it was certainly nothing to do with female gamers – to me, if you enjoy the games you enjoy the games. I'm sure Dixie came from some of the early concept sketches. Someone drew her with a big, long ponytail; I think it was because they wanted to make it flow behind her as she ran. I saw that and

COLLECT 'EM ALL!

Everything you can collect in DKC 2

BARRELS
■ Technically single-use weapons rather than collectibles. As well as standard and TNT variants, there are DK barrels that can bring Diddy or Dixie back to life.

BANANAS
■ Collect one hundred bananas to gain an extra life. Additionally, bananas are often positioned to give you a clue to the direction you should be going in.

COINS
■ There are Banana coins to pay for services, DK coins that decide your position in a hall of fame and Kremkoins to pay the toll to access a lost world.

KONG TILES
■ These have one of the four letters in 'Kong' stamped on them and are hidden around levels. Each time that you collect all four tiles you get an extra life.

KANNONBALLS
■ Besides being useful as close and long range weapons, when kannonballs are carried to and dropped into cannons they blast Diddy and Dixie to a bonus level.

CRATES
■ Similar to standard barrels, although less durable, crates are never the less worth throwing at enemies that are too tough to take out by jumping on them.

CHESTS
■ Essentially the same as standard barrels, except that they give up collectibles when they take out an opponent and don't break when they hit the ground.

EXTRA LIVES
■ Red, green or blue replicas of Diddy's noggin in balloon form. They typically appear at the end of each level but will quickly float away if not collected.

ANIMAL MAGIC

A guide to Diddy and Dixie's friends

SQUAWKS

■ As well as being able to fly around areas that would be otherwise inaccessible, Squawks has a never-ending supply of pellets that he can spit at opponents.

SQUITTER

■ Squitter's abilities are both web-based but work completely differently. His webshots are a decent range weapon, while his web platforms float in midair.

RAMBI

■ A thick skin and a spiky horn allow Rambi to dispatch foes that Diddy and Dixie can't, and his 'supercharge' lets him smash down walls to access bonus areas.

ENGUARDE

■ Like Rambi, Enguarde has a move that he can use to break into bonus sections. He can also take down enemies with his sharp nose and has two swimming speeds.
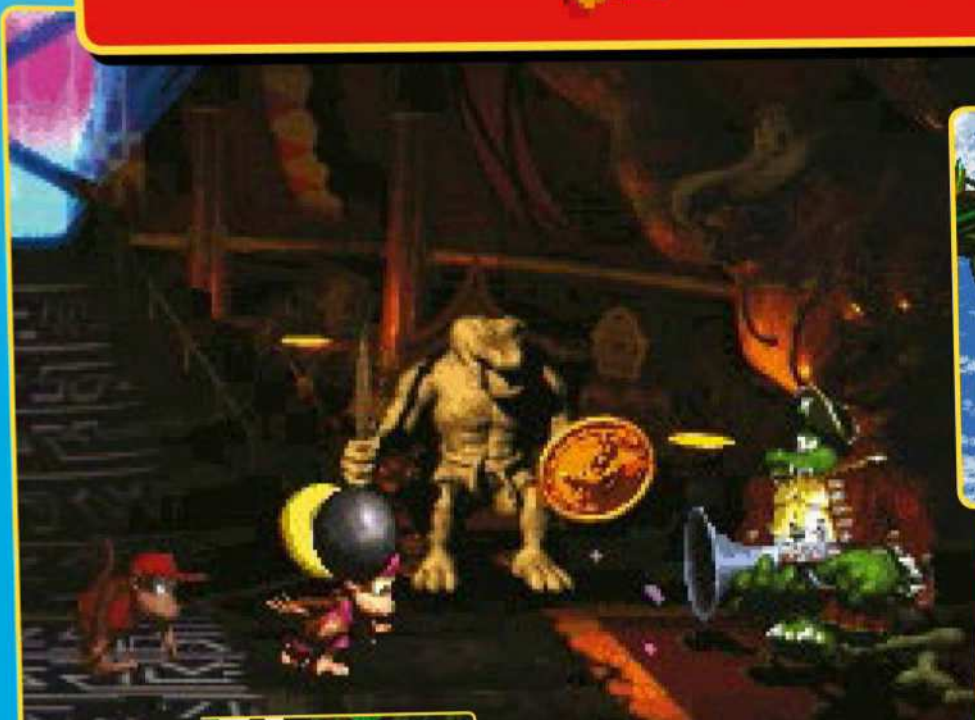
» [SNES] Alternating crosswinds make guiding Squawks through this thorny maze a daunting challenge.

» [SNES] The final showdown with K Rool ends with his blunderbuss getting plugged with a cannon.

DEVELOPER HIGHLIGHTS

DONKEY KONG COUNTRY (PICTURED)
SYSTEM: SNES, GAME BOY COLOR, GAME BOY ADVANCE
YEAR: 1994

DONKEY KONG COUNTRY 2
SYSTEM: SNES, GAME BOY ADVANCE
YEAR: 1995

BANJO-KAZOOIE
SYSTEM: N64, XBOX 360
YEAR: 1998

"but we had none of that in the second one so that gave us the freedom to have different backgrounds for the bosses. A lot of the bosses in the first game were fairly similar, where as the ones in the second one – like the giant sword with the hooks – allowed us to go a bit more out there and think about the things in the levels and try to build them into the boss battles."

thought: 'Oh. We can do something with that.' You would think it was part of the design, but really it was just one of those happy coincidences."

Dixie wasn't the only new player character in *DKC 2,* however, as unlike the original game, the second *Donkey Kong Country* would have stages where the Kongs could change into their animal friends. "You got so used to riding them that transforming into them was the next logical step," Gregg reasons. "I also didn't want the size of the monkeys to get in the way of what they could do. The vision for the parrot was that it was a small character that was very agile, and adding the monkeys to it made it *not* a small character that *wasn't* very agile. So it was a case of the physical size that they took up on the screen if the monkeys were there as well."

Of course, as well as new protagonists, Gregg's team were also coming up with fresh antagonists for their sequel, of which the bosses got particular attention. "In the first game, a proportion of the time was spent developing the tech and working out how to build the backgrounds," Gregg recalls,

The design philosophy for *Donkey Kong Country*'s follow-up also underwent a radical overhaul, with the emphasis shifting from speed-run-friendly to exploration.
"If we had made it speed runs again then there wouldn't have been much scope for us to go anywhere different with it," Greg argues. "We wanted to maintain the same 'go first' gameplay where all the barrels and baddies were set up so if you went first time – or got the timing right – then the levels were very fluid, but I also wanted to add something new to it. So the first one was very linear, and the second one introduced exploration."

In particular, *Donkey Kong Country 2* would feature many more optional bonus stages that could only be located if you followed the clues to their whereabouts. "The first game had its bonus routes, but you either found them or you didn't," Gregg concedes. "Certainly those giant DK coins in the second one, we really went to town with trying to conceal those. There was a pattern to the first game where you started to look at all the walls knowing that there might be a secret entrance

CLAPPER

■ When Clapper is jumped on by Diddy or Dixie, he obligingly cools down lethally hot water or freezes bodies of water containing schools of monkey-eating fish.

QUAWKS

■ A palette-swapped Squawks that can't fly up or fire pellets. In the only stage Quawks appears in he provides Diddy and Dixie with a slow, controlled descent.

RATTLY

■ By using his coiled tail, Rattly can jump much higher than Diddy or Dixie. He also has a 'superjump' move that's required to ascend *DKC 2*'s Toxic Tower stage.

GLIMMER

■ Besides being invulnerable to foes, Glimmer can light the way for Diddy and Dixie when they're navigating the pitch black waters of *DKC 2*'s Glimmer's Galleon.

"WE WANTED TO HAVE A BIT MORE INTRIGUE AND TRY TO EXTEND THE PLAYING TIME"

Gregg Mayles

there, where as in the second one we wanted to hide those coins in all sorts of hopefully clever places that people could try to figure out."

But as well as bonus levels, the *DKC 2* team also created a 'lost world' that could only be accessed after collecting enough coins from certain bonus rounds. "We wanted to have a bit more intrigue and try to extend the playing time," Gregg explains, "having those extra levels that you had to earn was just one of the ideas that we came up with. Rather than having bonus levels that you found on a level, they were effectively bonus levels that you had to work towards through the entire game. So every level had its own immediate hidden rewards, but the game also had a hidden reward at the end."

Rather than limiting *DKC 2*'s collectibles to the game's bonus stages, however, Greg and his team additionally crammed the follow-up's core levels with surreal pick-ups such as banana coins and extra life balloons, which Gregg puts down to responding to popular demand. "In the first game you collected stuff, but it was quite lightweight. We then just tried to experiment with pushing that a little bit further. It was just the feeling that people liked collecting and finding stuff in the first one, and going: 'Okay, well we'll give them more of that then. What else can we give them to collect or

how can we rack that up another level to make the collecting more involved?'"

Less involved, though, was the game's publisher Nintendo, which trusted Rare explicitly to deliver a great *Donkey Kong Country* sequel. "Nintendo had less involvement with *DKC 2*," Gregg confirms, "I just can't remember much communication with it at all. I think the success of the first one gave us some sort of trust – even though we had a huge amount of trust in the first game – but on the second game it was almost at the point where Nintendo didn't feel it needed to get involved at all."

With Nintendo's approval seemingly a foregone conclusion, *Donkey Kong Country 2 Diddy's Kong Quest* was released to rapturous reviews and brisk sales, although Gregg recollects taking the game's success in his stride. "At the time, I was still very young, and I guess to a certain extent I didn't appreciate what we had done. We just wanted to make a better version of the first one. So it came out and it didn't sell as many as the first one, obviously, because the first one was very different, but it was certainly more critically acclaimed."

In reviewing his game with hindsight, Gregg doesn't offer any tweaks, and when asked to choose between *DKC 2* and its predecessor he applies a degree of diplomacy. "I don't think I'd make any changes; I try not to look backwards too often. The first one was the groundbreaker; but the second one was a better version. I think the first one was better in terms of 'wow factor', but *Donkey Kong Country 2* was a better game in terms of the gameplay. So I guess we'll call it an honourable draw." ✱

» [SNES] As well as traditional platforming, *Donkey Kong Country 2* has several underwater sections to navigate.

EXTRA LIFE!

KEEPING OLD GAMES ALIVE

WE SPEAK TO THE FANS AND DEVELOPERS INJECTING NEW LIFE INTO THE VIDEOGAMES THEY LOVE TO FIND OUT WHY THEY DO WHAT THEY DO AND WHY SOME VIDEOGAMES REFUSE TO DIE

Words by Paul Walker-Emig

The dear readers of **Retro Gamer** will be more than aware than most of the issue of videogame preservation. The medium's intimate relation to the technology it is played on means its history is always at threat, whether that be due to the degradation of physical media, or the more modern phenomenon of online services being shut down by publishers. But even putting aside the issue of literal preservation, videogames' symbiotic relationship with technology also puts their legacy at risk in a less concrete way. This isn't the only industry where the focus tends to be on 'the next big thing', but it is one where it's progressively harder to revisit the games you've tossed aside over the years, or even

the so-called classics you've heard of, but never played. It's all too easy to leave them entombed as a vague nostalgic memory, a fabled turning point that many know the significance of, but few actually bother to experience themselves, or, worse, for them to be forgotten almost entirely. That is to say, even if videogames don't face literal death, there is always the risk of a metaphorical one. Just as a cryogenically frozen person in a sci-fi novel does not truly live until they are thawed out, a videogame that's stored as a collection of ones and zeroes on a hard drive must be *played* if we are to say it is still alive.

Fortunately, there are people fighting against videogame entropy. People who are working hard to keep old games going in a variety of ways and for a number of reasons.

Fabian Woltermann is the lead on one such project. The Freespace 2 Source Code Project is a fan-run initiative that's been enhancing the *Freespace 2* engine and keeping it running on modern systems since Volition released the game's source code to the community in 2002.

"At first, it was just fans doing what they wanted to do," Fabian replies when we ask him about the motivations behind the project. "The source code that was released to us lacked certain parts. The multiplayer matchmaking component had to be

» Fabian Woltermann is the lead on the Freespace 2 Source Code Project.

» [PC] Some more detailed models and updated effects courtesy of the Source Code Project make *Freespace 2* a pleasure to revisit.

» [PC] *Brutal Doom* ramps up the violence with a variety of death animations, dismemberment and splashes of blood.

ripped out. The cutscene code had to be ripped out, all for licensing reasons. And so, people recreated those portions to get the game to the point it was at on release."

Fabian tells us that fans were also making their own missions, tinkering with the engine, and adding things to the game that they thought were cool, but that there came a point where a mission to preserve the game they all loved was formalised. "I think it was in about 2004/2005 where we as the people who are in control of the central source code repository decided that one thing we need to do is always make sure *Freespace 2* retail is playable on modern machines. That became goal number one," Fabian says. "We're careful to make sure that any changes we make do not effect *Freespace 2*, or at the very least, only correct mistakes, obvious bugs that Volition introduced, to preserve what *Freespace 2* was intended to be."

However, what's great about the Source Code Project is that it hasn't stopped at keeping *Freespace 2* alive through literal preservation. It's also done it by turning the game into a tool for people to express their creativity, continuing in the spirit of the original game.

"Volition has always been very supportive of the modding community," Fabian tells us. "Volition included the mission design tool that they had in the engine and basically told people to go nuts, be creative and share their missions. That set the tone for what people were doing with this game." Fabian explains that the game's openness to creativity, combined with its efficient, minimalist storytelling, left players with a desire to fill in the gaps. "When *Freepace 2* ended on a massive cliffhanger, and with the existing creativity in the community, that was the starting point for a lot of people to ask, 'Okay, what's next?'. Or, 'What happened in the time skip between *Freespace* and *Freespace 2?'"* hence the creation of the Blue Planet campaign, which follows on from the events of *Freespace 2*. Then there are undertakings like *Babylon Project*, which "took everything from the *Babylon 5* TV show and turned it into a game", *Diaspora*, a *Battlestar Galactica*-themed mod, and *Wing Of Dawn*, an attempt to use the engine to create a kind of visual novel.

"When we decided that *Freespace* was going to be the one thing that we are guaranteeing can always be played, we also had to make sure that those projects don't get screwed over by that," Fabian insists. "When someone comes around with new

» [PC] Ever want to flip the bird at an enemy you don't like? *Brutal Doom* has got you covered.

» Marcos 'Sgt Mark IV' Abenante is the modder behind *Brutal Doom*.

ideas, we don't want to tell them, 'No, you can't do that.' That's certainly contributed to the longevity of our community as a whole and, as a result, this project."

Marcos Abenante, better known as Sgt Mark IV, the creator of the *Brutal Doom* mod, echoes some of Fabian's thoughts as he explains why *Doom*, the game that's captured his imagination, has refused to die.

"Modding is an essential part of the *Doom* experience," Marcos says, explaining that the ease with which Id Software made it possible to make levels for the game helped create the kind of community that would inevitably help sustain it. "There is virtually infinite content generated by the fanbase, around 50,000 or ▶

▶ 60,000 levels maybe," he suggests, while also pointing out that the evolution of the tools means it is far more flexible than *Doom* (2016) and its Snapmap editor.

That potential is what has kept Marcos with the game so long. He tells us that he first encountered *Doom* on the Sega Saturn in the Nineties, played it again on the PC in the early Noughties, and then dived into the modding scene towards the end of the decade. "I got fascinated with the capabilities of the sourceports like *ZDoom* and *Skulltag* (now *Zandronum*) and how much stuff they could add to the original game, so I started to dissect some mods such as *Doom Reinforced*, *The Monster Resource Wad*, *Beautiful Doom* and *NeoDoom*, to see how their code works, and then I started working on my first mod, *ArmageDoom*."

Marcos describes *ArmageDoom* as "a mess of half-baked ideas", but it took him onto bigger and better things. His next mod focused on the core systems, adding more blood, the ability to perform headshots and weapon specific death animations. *Brutal Doom* was born.

It has become one of *Doom*'s best-known mods. We'd suggest its success can be attributed to the way it zones in on and amplifies the elements that made the original game great. When you play it, you still feel like you're playing *Doom*, despite all the changes. It has the same intensity and gives you that same feeling of exhilaration you first had playing *Doom*. Or perhaps you could argue that it reimbues it with an intensity and sense of exhilaration that might be lost in the modern era. In Marcos' words, it's "*Doom* the way you remember it as a kid".

And Marcos isn't finished yet. "I have seen more and more people calling *Brutal Doom*, 'What *Doom* should have been if id Software had the time and the technology to do everything they wanted,' so this is the

» [PC] *Brutal Doom* utilises the retro aesthetic of old *Doom* and brings the gameplay up to modern standards.

THE SOUL STILL BURNS

Games kept alive by loyal fans

STALKER: SHADOW OF CHERNOBYL
■ This cult classic survival horror FPS has performed its own feat of survival, thanks to its dedicated fanbase. A strong mod scene has kept the game going for a decade, most notably through the standalone project *Lost Alpha*. Drawing on old promo images, previews, and leaked builds, *Lost Alpha* recreates cut content and introduces new systems to create an incredible *Stalker* experience.

PHANTASY STAR ONLINE
■ This pioneering MMO was almost killed when the servers were switched off, first for Dreamcast and GameCube and then for Xbox and PC. Its fans came to the rescue, though, setting up their own servers to keep *PSO* going. It's remarkable that over a decade since Sega shut down *Phantasy Star Online*, there are several servers to choose from, each with a healthy pool of players.

SUBSPACE
■ This *Asteroids*-esque MMO shooter didn't last long, effectively being abandoned a year after its 1997 release as developer Virgin Interactive Entertainment ran into trouble and sold much of its assets to Electronic Arts. However, fans stuck with the game and, in 2015, a fan-developed version called *Subspace Continuum* got a free-to-play release on Steam.

"The vast majority of our games were implemented by folks who just loved them and have nostalgia"

Eugene Sandulenko

direction I decided to take, making the 'Doomiest version of *Doom*'." This has included "adding weapons and features that were planned in the Alpha version of the game", drivable tanks, visual tweaks, and lots more. Marcos won't be the only one keeping *Doom* alive and kicking. He argues that the combination of an implied bigger universe and accessible modding tools means not only that "*Doom* is still being modded over two decades after its release", but that it "will probably still be for two decades more."

Not every community keeping games alive is focused on a single title. ScummVM is a tool well known among adventure game fans as a resource for revisiting the genre's roots. It's also often misrepresented as an emulator. Fortunately, we have project leader Eugene Sandulenko to set that right.

"ScummVM is a collection of the game engine reimplementations," Eugene tell us. "Many of those engines, including the Scumm, were in fact, Virtual Machines. ScummVM has many Virtual Machines with

their own opcodes, address spaces etc. Basically, we rewrite the original games as they were developed with use of our hardware abstraction layer, OSystem, which in turn makes them work on any platforms where OSystem was ported. Emulators implement virtual computers, and then the original code is executed there. As a result, they demand much more resources than ScummVM does, as ScummVM, for instance, uses your operating system capabilities for writing to your hard disc, and emulators need to have a virtual HD for the same purposes."

We asked Eugene whether the preservation of adventure game history was consciously on the minds of those who have chosen to spend their free time working on ScummVM and getting new games working on the platform. "Yes and no," he replies. "I personally view it as preservation, thus we sometimes add seemingly non-used features such as CGA rendering, implementation of the original (and often limited) save/load dialogs, and being faithful to some of the game options. But on the other hand," Eugene continues, "the vast majority of our games were
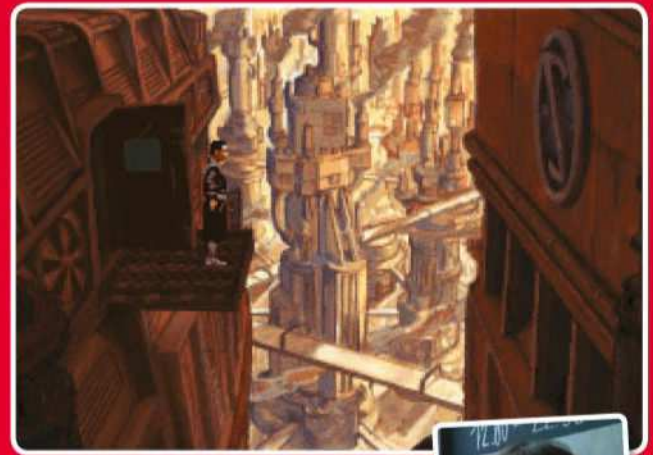
» [PC] Revolution Software released *Beneath A Steel Sky* as freeware in 2003, opening it up for use on ScummVM without any of those legal grey areas.

implemented by folks who just loved them and have nostalgia."

Reviving an old game may be about personal passion, or, Eugene suggests, enjoying the challenge of solving complex riddles while reverse engineering game software, but ScummVM has become an important preservation tool nonetheless. Eugene tells us the team has been enthusiastically contacted by developers whose games they've been working on with materials for the engines and ScummVM has been used to rerelease adventure classics on services like GOG and Steam, such as *Toonstruck*. Perhaps ScummVM can even claim some credit for the rereleased and remastered versions of several LucasArts classics thanks to the way it kept their legacy alive. ▶

» Eugene Sandulenko is helping keep old-school point-and-clicks alive with ScummVM.

SONIC THE HEDGEHOG SERIES
■ Fan ports are normally shut down by publishers, but Sonic fan Christian Whitehead managed to persuade Sega to give his Retro Engine version of *Sonic CD* an official release, its success leading to mobile ports of Sonic and *Sonic 2*. Christian's collaboration with PagodaWest and Headcannon, the critically acclaimed *Sonic Mania*, followed, giving classic *Sonic* levels a new lease of life.

MYTH II: SOULBLIGHTER
■ Bungie's tactical RTS released in 1998, *Myth II*, is still alive and kicking thanks to the efforts of the fan-run *Project Magma*. The project encompasses map making, a special forces plug-in that replaces *Myth II*'s fantasy inspired characters with WW2-styled units, managing websites dedicated to the game, and anything else that will help the game to keep on going.

GOLDENEYE 007
■ Using Valve's Source engine, fans have recreated N64 classic *GoldenEye 007* for a modern audience. All the game's classic maps are faithfully recreated, but the Source version also features updated visuals, additional maps based on single-player levels that didn't appear in the original's multiplayer and others inspired by other *James Bond* films, as well as some extra modes.

HOW GAMES ARE KEPT ALIVE

REMAKES

Not everyone has the knowledge or motivation to mess around with emulators or scour online auctions to revisit videogame classics. Remakes like *Shadow Of The Colossus* on PS4, or HD updates of games like *Devil May Cry Collection*, prove that providing an easy way to play these titles on modern machines – along with modernising touches to iron out some of the frustrations present in the originals, and updated visuals – can revitalise an old title.

MODS

One great way of extending the life of games is by making them open for modification. Firstly, this allows fans to keep the game looking great as technology improves. Perhaps most importantly, however, it also allows those modders to create new ways to play the game, whether that be by adding new mechanics, quests, or whatever else, keeping the game fresh. The strong community behind *Skyrim* is a prime example of how this can work.

FAN SERVERS

When a publisher decides to shut down the server for an online game, it's as good as dead. That is, unless there's a strong community willing to go the extra mile to keep it going. The SaveMGO project is a prime example. SaveMGO brought together a group of ethical hackers who managed to get the original *Metal Gear Online* back working again in 2014, two years after it was shut down in 2012.

DIGITAL SHOPS

There are several examples of digital stores that have given new life to old games. Nintendo's Virtual Console has been a great way for the company to make money from its classic titles on modern machines, while Good Old Games (GOG) is a great portal for getting old titles to PC, including the likes of *Dungeon Keeper*, *X-Wing Vs TIE Fighter*, *The Longest Journey*, and many more.

HOMEBREW

The homebrew market has given people all sorts of ways of reengaging with old games. This might be through games ported to different systems, remixed versions of *Mario* games that you can buy on a cartridge for your NES, such as *Mario Adventure*, or hacks that allow people to play pirated versions of old games that are too difficult or expensive for them to get hold of otherwise.
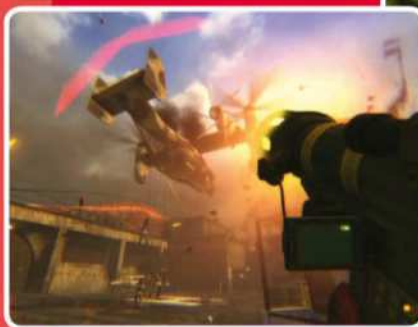
» [PC] *Black Mesa* has been given the blessing of Valve itself and you can find it on Steam.

» [PC] When you've got to deal with unforeseen consequences, they may as well look pretty.

▶ The desire to preserve a game you love doesn't always end in the faithful recreations that ScummVM is associated with. Crowbar Collective's *Half-Life* remake *Black Mesa* is a perfect illustration of that. "Initially there were two projects working on creating an HD *Half-Life* experience," project lead Adam Engels tells us. "Once they realised they were basically working toward the same goal, they merged and kicked off the team that'd [create] *Black Mesa*."

Adam explains that what started as a simple visual update soon evolved into something else entirely, "Early objectives were just to replace models and textures in *Half-Life* to high-quality, current-generation versions," he says. "Fairly early in development, though, it turned into a complete reimagining of *Half-Life*, as if Valve made it with the knowledge,

experience, and technology they had for *Half-Life 2*. As the objective changed, our scope ratcheted up (almost to a fault). I think our unwillingness to compromise is part of what made the project successful, but it had the drawback of extending our development timeline."

Indeed, development began way back in 2004, the game's growth into an ever-more ambitious project pushing its release back. Still, it's been worth it. While most fan remakes are shut down by publishers, Valve embraced *Black Mesa* and it is now in Early Access on Steam with only a reworked version of the last section on Xen to be completed.

Black Mesa's evolution from HD polishing to remake brings into focus a conundrum that can be faced when you're are trying to revitalise a game for a modern audience. At what point do the changes you make mean that the game loses the essence of what

» Adam Engels is working on *Black Mesa*, which has been in development for almost a decade and a half now.

CRASHING THE PARTY

BREATH OF THE NES

■ Most remakes bring retro classics into the modern era, but *Breath Of The NES* took the opposite approach, aiming to remake Nintendo's *The Legend Of Zelda: Breath Of The Wild* in a retro style. Unsurprisingly, WinterDrake received a DMCA takedown from Nintendo and had to take his demo of the game down from itch.io. WinterDrake plans to keep working on the game in a new, non-*Zelda*, form, though.

AM2R

■ Short for *Another Metroid 2 Remake*, Milton Guasti's *Metroid II* remake took around ten years to develop. The game included new art, larger rooms and updated mechanics and was praised as a fantastic version of the game true to the original's spirit. Thankfully the game was released in full before Nintendo forced Milton to take it down, which means you can still find it online.

> ❝**Ultimately, we started saying more and more, 'What would Valve do?'** ❞
>
> Adam Engels

made it special in the first place? How do you decided what can change and what must stay the same?

"Deciding if we should change parts of the game was a big deal to us," Adam replies. "There were parts of *Half-Life* that we agreed were not as fun, but who were we to say we knew better? Ultimately, we started saying more and more, 'What would Valve do?' That eventually became our mission statement. Not to remake the game 1:1, but to remake it as best we could with the lessons taught to us by Valve."

Nightdive Studios has similar decisions to face having decided to follow up on its enhanced edition of the original *System Shock* with a complete remake. The fact it's doing so also begs the question: why take two different approaches to rereleasing the same game?

"*System Shock* is an absolutely brilliant game, but two things stand out to gamers playing the original game or our enhanced edition," Nightdive CEO and founder Stephen Kick responds. "First off, the graphics look like what one would expect from a 1994 game. We wanted to bring the level up to modern standards. And then there was the challenge of the UI. The inventory system and the controls of the original game are quite difficult for today's gamers to get used to. In our enhanced edition, we added some basic elements such as mouse look, but even with that players have a hard time.

In working on our remake, we took the opportunity to address both aspects," Stephen continues. "Visually, the game is being redone in Unreal. We followed much the same principles in reworking the user interface. We wanted to modernise it so that players can enjoy the game, while staying true to the franchise. We decided to adopt the inventory system that was introduced in *System Shock 2*. It will be familiar to players, make the game more enjoyable, and still preserve the legacy."

The task of preserving videogame history and keeping classic games ticking usually falls to the fans, but in Nightdive, we have an example of a company that's made keeping old games alive its business, having rereleased versions of *Turok 2, I Have*

No Mouth And *I Must Scream, The 7th Guest,* and many more.

"Nightdive was founded for the purpose of restoring classic games that would otherwise have been lost," says Stephen. "We think it's important for modern day gamers, and I mean both consumers and the people that make games, to understand what came before them. It's imperative that we don't forget the rich history that's been established by the studios and individuals who forged the path we're on today."

It would seem there's more than one way to ensure that we don't forget that history: mods that let us experience an old game in a new way, updates to make them more palatable, remakes that remix and tweak or tools that simply make it easy to play old titles on modern machines. We would suggest that each approach is a valid way of making sure older games continue to live pm in the best way possible: by being played by gamers. ✱

» Stephen Kick is Nightdive's CEO and has made keeping old games alive his company's modus operandi.

» [PC] Battering baddies with a pipe in *System Shock* will never have looked so good once Nightdive's remake is complete.

Five remakes that have been shut down by publishers

GALAXY IN TURMOIL
■ This title was started as a remake of a game that was never released. Frontwire Studios wanted to remake the cancelled *Star Wars Battlefront III*, inspired by leaked footage of the game and the original two titles. After agreeing a distribution deal with Steam, however, Lucasfilm and EA shut it down. Development is continuing, but with all *Star Wars* references removed.

PROJECT VAULDERIE
■ As a cult classic known for having great ideas and fantastic storytelling hampered by shoddy technical execution, *Vampire: The Masquerade – Bloodlines* has always been an ideal candidate for a remake. *Project Vaulderie* was a fan project that aimed to fix those technical issues, but was shuttered after the lawyers from CCP got in touch and insisted that development ceased.

CASTLEVANIA (UNREAL ENGINE)
■ Dejawolf spent about a year working on a remake of the original *Castlevania* in the Unreal engine before receiving the dreaded cease-and-desist letter from Konami. While insisting that Dejawolf must stop development, Konami at least allowed Dejawolf to keep the files of the demo up online and even said it would look into the possibility of getting the indie developer an official licence.

ULTIMATE GUIDE TO

SAMURAI SHODOWN

When SNK decided to mine Japan's history of warrior culture
that lived and died on the edge of a folded metal blade, it created
Samurai Shodown, one of the most iconic versus fighters of all
time. It's time to grab your katana and join the fray…

Words by Robert Jones

Even if it seems certain that you will
lose, retaliate. Neither wisdom nor
technique has a place in this. A real man
does not think of victory or defeat. He
plunges recklessly towards an irrational death. By
doing this, you will awaken from your dreams."

So begins the *Hagakure*, also known as *The
Book Of The Samurai*, the most definitive guide
to Japan's historical elite warrior culture that
has survived today. And that quote, one of the
book's most famous, perfectly sums up SNK's
Edo-period versus fighter *Samurai Shodown*,
a bloody, hyper-violent, inherently Japanese
masterpiece of design and programming.

» [Neo-Geo] Tam Tam is one the game's most distinctive designs and his Catherine wheel special move, where he rotates his large scimitar, is deadly.

"You or your opponent will die, that it certain, and often badly via loss of limb"

» [Neo-Geo] Earthquake, despite his appearance, is actually a practitioner of ninjutsu. He is slow but hits very hard in *Samurai Shodown*.

» [Neo-Geo] Win a fight and you get treated to some excellent character artwork, as well as a brief snippet of written victory speech.

Shodown, literally, encourages the player to plunge forward and fight to the last, even if the odds are stacked against them. It does this by building in a 'Rage Gauge' mechanic (one of the first, too) which triggers when a player has received a lot of damage and is close to death, granting them enhanced power and damage dealing capabilities to cut down their foe.

The game earnestly demands blood and, with an enhanced damage strong attack capable of annihilating most wounded opponents in one blow, that glorious retaliatory victory calls to you at all times in *Shodown*, no matter how badly you have fought or how close to death you may be. You or your opponent will die, that it certain, and often badly via loss of limb, arterial puncture, or a geyser-style explosion of blood as a blade rips through flesh and bone.

Barbarian aside, just as many had not seen such levels of intense combat and death in a videogame pre-*Samurai Shodown*, no one had seen a weapons-based versus fighter as violent as this in arcades before either. To play *Shodown* was, like a warrior following the way of the samurai to its fullest extent, akin to waking from a dream to a bright new world.

The vividness of the warriors competing in mortal combat, which on the whole felt more real than in rival fighters (and later we will see why), the brightness and scope of the ▶

Fighters of Destiny

The key players in this steel-forged epic

HAOHMARU
■ The main protagonist of *Samurai Shodown*, Haohmaru is a ronin whose aim in life is to travel Japan and face adversaries to perfect his fighting skill. His design is loosely based on the legendary swordsman Miyamoto Musashi, who famously remained undefeated in over 60 duels.

UKYO TACHIBANA
■ Another iconic character, and one that is present in most of the games in the *Samurai Shodown* series, Ukyo is an expert laijutsu swordsman who fights despite his body being plagued by tuberculosis. Like Haohmaru, he is based on a historical Japanese swordsman, Sasaki Kojirō, the nemesis of Miyamoto Musashi.

GALFORD D WELLER
■ One of *Samurai Shodown*'s numerous ninja characters, Galford is an American sailor-turned-ninja who – along with his faithful husky Poppy – fights for justice and to vanquish evil wherever he finds it. Interestingly, his character was reportedly based on a character in the Japanese manga Animal Doctor, who also owns a husky.

HANZO HATTORI
■ Hanzo is directly based on the real historical character Hattori Hanzō, the most famous samurai of the Sengoku era and leader of the powerful Iga ninja clan. Hanzo is not only the coolest ninja in *Samurai Shodown*, and one that has appeared in every iteration to date, but maybe in any game ever.
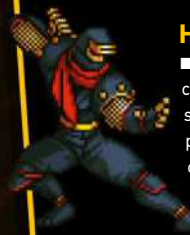
KYOSHIRO SENRYO
■ A famous Kabuki theatre star who also possesses excellent skill with a naginata (a Japanese bladed pole), Kyoshiro – whose first name translates as 'dying insane' in Japanese – is one of *Samurai Shodown*'s most colourful and crazy characters. His fighting style is based largely on kabuki dance moves and gestures.

GEN-AN SHIRANUI
■ A disciple of 'the way of evil' (the baddie's way of choice, no doubt), Gen-an is one of *Samurai Shodown*'s most distinctive characters and, if you look closely, you'll see potential nods to both *Street Fighter*'s Blanka and A *Nightmare On Elm Street*'s Freddie Kruger. Gen-an is a member of the feared Shiranui clan and attempts to kill Amakusa.

Conversion Capers

NEO-GEO AES
■ Identical to the Neo-Geo MVS version that debuted in Japanese arcades in the summer of 1993, the Neo-Geo AES home cart version of *Shodown* (released a month after MVS) delivers the definitive experience of this post-Sengoku period slasher. Fast loading and playing, the 118Mbit cart really showed of what the AES could do.

NEO-GEO CD
■ SNK's CD-based Neo-Geo system delivers a very faithful port of the MVS original in terms of graphics and gameplay, as well as arguably superior sound. However, thanks to the Neo-Geo CD's single-speed drive it suffers from horrendous load times even compared to some other CD loading systems.

SUPER NINTENDO
■ One of many cartridge conversions handled by Takara, the Super Nintendo version – while not looking, sounding or running as good as the MVS edition – does compare well to some other ports, mainly thanks to it maintaining a full roster of characters and keeping intros, audio samples, music and more intact.

FM TOWNS
■ Handled by JHV, the FM Towns port of *Samurai Shodown* is, despite slowdown and dynamic camera issues, a surprisingly solid version. Interestingly, due to those dynamic camera issues, background zoom disabling was built into the game's options menu, which improves framerate but narrows the combat field.

MEGA DRIVE
■ Another port handled by Takara, the cartridge version of *Shodown* for the Mega Drive does not compare well to the arcade original. Dynamic background zoom is ditched for a fixed camera, the cinematic introduction is non-existent, as is post-fight character art, some audio samples and even certain characters and moves.

3DO
■ A youthful Crystal Dynamics handled the underrated 3DO port of *Samurai Shodown*, which thanks to a double-speed drive and programming know-how, landed on the console with dynamic camera, full roster and all moves intact, as well as far superior loading times compared to Neo-Geo CD.

SEGA CD
■ One would of expected JVC, the handler of the Sega CD port of *Shodown*, to make up for all the omissions that compromised the earlier Mega Drive edition. In reality, despite the game landing on store shelves two years after the original, this version still omits dynamic background zoom and the character of Earthquake.

GAME BOY
■ Continuing its run of cartridge ports, Takara handled the Game Boy version of *Shodown* and, surprisingly considering the system's limitations, delivered a fun, full fat edition. All the characters, stages and music are present and, as you can see by reading the nearby sidebar, it boasts some port-exclusive content, too.

GAME GEAR
■ Coming out six months after the black and white, but surprisingly faithful, Game Boy edition, the Game Gear version of *Shodown* – despite delivering a welcome dose of portable colour – is badly compromised on the character front, with only nine fighters selectable (the original has 12). Otherwise it is a solid port.

PLAYSTATION
■ A Japanese-exclusive release as part of a bundle with *Samurai Shodown II*, the PlayStation version of *Shodown* is one of the less well-known versions, despite it delivering a great experience. Indeed, aside from some modest load times, everything else remains intact, with the game's sound standing out in particular.

PLAYSTATION 2
■ Another lesser-known port of Samurai Shodown, the PS2 version of the game is playable via the *Samurai Shodown Anthology* collection, which contains each game in the series from the original up to *Shodown VI*. As with the PlayStation version, this is a smoothly running experience with dynamic background camera.

WII VIRTUAL CONSOLE
■ Playable on both Wii and Wii U, the Virtual Console edition of *Samurai Shodown* is handled by D4 Enterprise and was one of the first digital download ports of the game to go live back in 2008. The game is also available via the *SNK Arcade Classics Vol 1* compendium on Wii, too.

PS4
■ As you would expect from a version released 23 years after the original, on a modern console, the PS4 version of the *Samurai Shodown* runs fantastically well, with HD Video Output up to 1080p delivered. The port also delivers a wealth of options to tinker with, as well as region (Japanese / English) switching.

NINTENDO SWITCH
■ The latest port of *Samurai Shodown* is incredibly faithful, with Hamster, Co delivering a full-fat, portable edition that makes squaring off against Amakusa just as adrenaline-inducing as it ever was. Additional modes, region switching, as well as the ability to tweak visuals, arguably make this the most definitive edition.

» [Neo-Geo] Galford cuts through both barrel and opponent Charlotte to end the fight with a bloody arterial puncture fata ity.

» [Neo-Geo] Kyoshiro demonstrates his flame breath special move, which looks and works almost exactly like Dhalsim's Yoga Flame in *Street Fighter II*.

"No one had seen a weapons-based versus fighter like this before"

New Heroes

Interestingly, the Game Boy port of *Samurai Shodown* has a brace of exclusive side-characters, Hikyaku and Kuroko, who in the normal edition are simply NPCs. Kuroko (above) is the cloaked-in-black, flag-waving battle judge that oversees each fight between the game's warriors, while Hikyaku (historically, 'hikyaku' were couriers and messengers in Japan) is the servant-come-postman who drops items into fights. On Game Boy both these characters are playable, with Hikyaku delivering bombs as his primary form of attack, and Kuroko wielding and throwing his flags with surprisingly lethality.

▶ background scenes, which were loaded with action and detail, and the gloriously authentic musical score and audio, which utilised genuine instrumentation from the Edo period such as the shakuhachi, koto and taiko, fused together to create an experience that – especially in the west – felt excitingly alien.

Yes, there had been big versus fighters released before *Samurai Shodown* (the now-legendary *Street Fighter II* had been out for two years upon its release in July 1993), however, while *Shodown* shared their cartoon aesthetic, unlike those games it was constructed from its core around an unprecedented authenticity to Japanese culture and history. From the characters, plot and setting, to the presentation and spoken language, *Shodown* doesn't check any of its blows. And, arguably, it is this more than anything that has led the game to endure so well and lodge itself very firmly as a fighting game genre favourite. ✱

EARTHQUAKE

■ Ah, Earthquake, the SNK trading card collector's worst dream (the character was very common). A Texan ninja and bandit, Earthquake uses the distinctive kusarigama weapon, a chain-sickle that delivers big damage. His motivation in is to exploit the chaos caused by Amakusa to steal all the world's treasure.

WAN-FU

■ Despite being modelled on Miyoshi Seikai, one of the Ten Heroes Of Sanada (a legendary group of Sengoku ninja), Wan-fu sports one of the more bland designs, with only his scimitar standing out. Hailing from China, he fights to discover men worthy of unifying his warring country.

NAKORURU

■ One of *Samurai Shodown*'s best and most enduring characters, Nakoruru is a powerful warrior priestess who hails from Japan's cold north (she is based on the native Japanese Ainu people who historically have inhabited the region of Hokkaido). Nakoruru is at one with nature and fights to defend it from Amakusa.

CHARLOTTE COLDE

■ Full name Charlotte Christine de Colde, Charlotte is a French noble and expert fencer, who travels to Japan to do battle with Amakusa. Interestingly, her design was based on Oscar Francois De Jarjayes, a character from the popular Japanese manga *The Rose of Versailles*. She is a fast character with a selection of slashing strikes.

JUBEI

■ Based on the legendary Yagyū Jūbei Mitsuyoshi, one of feudal Japan's most famous samurai, Jubei enters the events of *Samurai Shodown* having previously defeated a young Haohmaru in combat. Jubei has only one eye, and practices one of the oldest forms of kenjutsu (swordsmanship).

TAM TAM

■ Missing from many later instalments in the series, Tam Tam is a South American warrior who wears a fearsome (and powerful) daemon mask while in combat. Like Wan-fu, Tam Tam wields a scimitar as a weapon, however, unlike him he fights with a crouched, compact style that betrays his long reach.

AMAKUSA

■ The main villain of *Samurai Shodown* and, later, *Samurai Shodown IV*, Amakusa is actually based on the real historical character Amakusa Shirō Tokisada, a Japanese Catholic who led the Shimabara Rebellion against the Shogunate and was executed for it. In *Shodown* he is resurrected after making a pact with the dark god Ambrosia.

Digital

» This video clip of Hasbro executives watching the NEMO demo of *Scene Of The Crime* appeared in *Night Trap* as an Easter egg.

With Hollywood production values, an expensive cast of actors and a burning desire to make 'interactive television', Digital Pictures pioneered Full Motion Video-based games. Retro Gamer talks to Lodewijk Coen and Mark Klein

Words by David Crookes

Back in March 1995, in an article penned for *Next Generation* magazine, Tom Zito expressed his feelings about television. He said it was "no secret to anyone" that he hated the medium but he also acknowledged the irony. That's because he was the president of Digital Pictures – a developer obsessed with marrying filmed footage and games. And it was he who led the FMV craze of the Nineties thanks to a desire "to talk back to your TV".

Digital Pictures was born in 1991, but Tom's interest in creating interactive television emerged six years earlier when he was employed at Axlon, one of Atari founders Nolan Bushnell's growing number of companies. He was working on the AG Bear, a talking toy that responded to human voice and he liked the interactivity. When the project was done, he approached Nolan with a new idea to combine interactive images with a video stream. Nolan gave him the green light to develop a prototype.

Tom gathered a formidable team. There was Rob Fulop, creator of the Atari 2600

» [Mega-CD] *Sewer Shark* was a rail shooter that was bundled with the Mega-CD and later ported to the 3DO.

Pictures

» [Mega-CD] The violence in *Night Trap* was not as bad as some people made out.

» Stick the Mega-CD disc of a Digital Pictures game into an audio player and select track two to hear a recording of a zombie-like chant. Then play it backwards.

classics *Missile Command*, *Demon Attack* and *Cosmic Ark*, David Crane, cofounder of Activision and *Pitfall!* developer, graphics artist and games designer Michael Becker, and Steve Russell, the American computer scientist who coded *Spacewar!* in 1962. They examined the ColecoVision console's graphics chip and discovered it could display videogame images over a clear background.

It was the breakthrough they needed, but Nolan baulked at the $7 million Tom estimated to get such a machine ready. Tom sought an alternative financial backer and found a willing partner in the toy company Hasbro. More staff was brought on board and the team worked on the console, codenamed Never Ever Mention Outside (or NEMO), under the watchful eye of Axlon. When Hasbro wanted development to quicken, however, Tom faced a tough choice: to leave Axlon and Nolan or risk losing Hasbro's financial backing. Tom promptly left and he created a new company called Isix.

NEMO was an interesting console as it utilised VHS tapes rather than cartridges. This allowed computer data to sit alongside video and audio tracks, all of which could be switched to allow for interaction, branching and switching. To show off the new tech, three demos were created: a baseball game called *Bottom Of The Ninth Inning*, an interactive music video for The Cars' *You Might Think I'm Crazy*, and *Scene Of The Crime* which dabbled with the idea of letting players view the gaming action through a series of surveillance cameras.

Among those who assisted with the creation of *Scene Of The Crime* was technical wizard Mark Klein. "I was hired by Tom as a consultant to design the operating system for NEMO," Mark tells us. "And I developed the scripting language INTERVAL that was used to implement the gameplay of *Scene Of The Crime*. The titles were unique as the first appearance of

interactive video at the frame-by-frame granularity. We were pioneering a genre."

Scene Of The Crime was the highlight of Tom's successful NEMO pitch to 22 executives at Hasbro's headquarters in Pawtucket, Rhode Island in December 1986. Having been granted more funding, Tom looked to take on more staff. His roster would eventually include writer Ken Melville, graphics artist Lodewijk Coen, business development expert Anne Flaut-Reed and Kevin Welsh, who Lodewijk dubs an "interactive video and technical wizard".

Tom also threw himself into two key productions. The first was *Night Trap* which grew from the concept of *Scene Of The Crime*. Shot like a Hollywood production in Culver City, California using actors over 16 days in 1987, it cost a staggering $1.5 million. Jaws dropped further when Tom spent $3 million creating *Sewer Shark*, a first person, on-rails shooter written by Ken Melville. All was going well. "We finished the hardware and software development and the system was almost ready for large-scale manufacturing," Mark Klein says.

But then, in late 1988, two months before the console was due to be released, Hasbro axed NEMO – or the Control-Vision, as it was to be called. Executives feared the $299 price tag would cause it to tank in a market dominated by the cheaper NES. Tom's team was also hit by the illness of Hasbro's chief executive officer, Stephen D Hassenfeld, who died in 1989 of pneumonia and cardiac arrest aged 47. Stephen was a big supporter of the NEMO project. ▶

INSTANT EXPERT

■ Tom Zito's first job was a rock critic for the Washington Post.

■ *Night Trap* and *Sewer Shark* were originally produced for a VHS-based console called Control-Vision.

■ *Sewer Shark* was bundled with the Mega-CD expansion.

■ *Diff'rent Strokes* actress Dana Plato appeared in *Night Trap*.

■ *Ground Zero: Texas* was shot in California by a full Hollywood film crew for $2 million.

■ It was written by *RoboCop* screenwriter Edward Neumeiser.

■ Steve Russell, creator of 1962 classic *Spacewar!*, worked for Digital Pictures.

■ Digital Pictures provided four of the Mega CD 32X's six games: *Corpse Killer*, *Night Trap*, *Slam City With Scottie Pippin* and *Supreme Warrior*.

■ Alleged bad violence in *Night Trap* led to the setting up of the ESRB videogame ratings system.

■ 50,000 copies of *Night Trap* were sold following the Senate hearings.

■ Corey Haim of *The Lost Boys* appeared in *Double Switch*.

■ *Marky Mark and the Funky Bunch: Make My Video* got a savage 0/10 in *Game Informer* magazine.

■ A Saturn version of *Supreme Warrior* – shot in Hong Kong – was cancelled.

■ FMV game *Kids On Site* for Mega-CD was made under the 'Sega Club' brand.

■ Public domain footage was sometimes used in the games.

■ A revamped *Night Trap* was rereleased on its 25th anniversary last year for the PC and PS4.

NOT QUITE GAME OVER

■ Digital Pictures' promising game *Maximum Surge* was canned in 1996 when the company closed. But it didn't mark the end for Tom Zito's video footage. Snapped up by Insight Film And Video Production around 1999, it was used within a 2003 movie bearing the same name as the game. And it gave fledgling director Jason Bourque his break.

"We had footage starring Walter Koenig and Yasmine Bleeth [stars of *Star Trek* and *Baywatch* respectively] as well as a script by Keith Shaw, the brother of the company's owner," Jason tells us. "We ended up creating a virtual reality-type plot based around getting this footage to work in a movie, although Koenig wasn't too happy: he'd signed up for a videogame and thought the project was dead."

To help the footage make sense, Jason spent eight days filming additional footage on a budget of under 500,000 Canadian dollars. "When I was cutting it, we also looked at using film from other videogames like *Corpse Killer*, *Supreme Warrior* and *Quarterback Attack*," he adds.

Picked up by a Canadian sci-fi channel and later released on DVD as *Game Over*, it helped turned Insight into Canada's biggest independent production company. "A lot of people's careers in British Columbia were born from this really crappy, C-movie," Jason says.

▶ "I was surprised the Control-Vision was cancelled," says Mark. "There had been other milestones that we barely made or barely missed and yet the project had not been cancelled then. Only once we had virtually completed everything was the product shelved." The Isix team was disbanded and the employees went their separate ways.

Tom bought the rights to the games and stored the assets, including the filmed footage, in a warehouse in Rhode Island. There they languished, gathering dust before discussions got underway with Nintendo in 1991 to port *Sewer Shark* to its proposed new CD-based Play Station. Tom created a new company called Smart TV – swiftly changed to Digital Pictures – and he approached Mark, Ken, Lodewijk, Anne and Kevin to help him.

"I think Sony was interested in using its massive entertainment business assets in interactive projects, especially music videos, which were still huge in those days of MTV," recalls Lodewijk. "The hybrid nature of the medium – of watching a movie passively and playing a game interactively – posed some challenges but we really did some pioneering work in game design."

Unfortunately, the plans hit the buffers when Nintendo fell out with Sony and the Nintendo

Play Station was scrapped. But, as luck would have it, Sega was working with CD-ROM for a Mega Drive add-on, convinced the format was the future of gaming media. Needing unique content, Sega and Tom began talking. An agreement to port the unreleased FMV games to the proposed Mega-CD was struck.

One of the first tasks was figuring out how to work with CD-ROM and this was, as Mark admits, a difficult task. "We developed a video compression algorithm tailored to the needs of full-motion video," he tells us. "We digitised and compressed all the footage, frame-by-frame but, because CD-ROMs were in their infancy at the time, we faced and surmounted many technical challenges." One issue was that the Sega CD wasn't designed to display video ("It was far from high definition," Mark says). Making life easier, however, was that footage for the two games was already filmed.

"Kevin Welsh did an awesome job rebirthing *Night Trap* for the Mega-CD," says Lodewijk. Based on the original concept by Rob Fulop and James Riley, Kevin produced the game along with Ric Lacivita. Meanwhile James directed it and Lodewijk created the computer graphics. Extra footage was shot for the introduction which referenced Sega's products and the game was dedicated to Stephen Hassenfeld. "We had to juggle the trade-offs relating to the length of video, the quality of the image, the user interface, audio and gameplay on this tiny CD and that was the main challenge we were facing," says Lodewijk. "Initially, we basically blew our competitors out of the water with that technique."

Sewer Shark was also ported. Produced by JoAnne Michels-Bennet and Amanda Lathroum it picked up on Melville's work and Fulop's original concept. "Amanda Lathroum was a Harvard PhD and she started out as our receptionist when Digital Pictures was based on Hamilton Avenue in Palo Alto," recalls Lodewijk, whose own team was responsible for the graphical user interface of the games. "She's incredibly smart and she

» [Mega-CD] The key to beating *Prize Fighter* was pressing the right button at the right time.

DEFINING GAMES

NIGHT TRAP

■ Shot over 16 days in 1987 with an extensive cast, a large lineup of stuntmen and all of the associated editors, assistants and engineers that tend to be involved in Hollywood productions, the interactive movie videogame *Night Trap* was rejigged for its Mega-CD release five years later. It was lauded for its full-motion video. Yet despite a plot that had players keeping tabs on a house packed with high-spirited teens, activating traps for the evil Augers who were intent on endangering them, it soon became apparent that its single-button press gameplay was rather dull.

SEWER SHARK

■ This swam in better waters than *Night Trap* and it achieved the glorious combo video motion with blisteringly fun on-rails shooting action. It became a must-play game for Mega-CD owners, so much so that it ended up being bundled with the system. Yet it still bore the hallmarks of FMV: over-the-top acting and a slim plot. Even so, it had pedigree. John Dykstra was the director and he had led the special effects for the original *Star Wars*! So while the game mainly revolved around controlling a crosshair, there was no faulting its ambition.

GROUND ZERO: TEXAS

■ As with *Night Trap*, *Ground Zero: Texas* had a first-person viewpoint and, like that aforementioned title, its gameplay consisted of peering through a series of cameras, this time to save the disappearing people of a small Texan town. Rather than trapping enemies, however, players had to shoot them instead, lending the feeling of a target shooting game, albeit one that employed the services of a Hollywood film crew. Directed by Dwight H Little, whose credits include *24*, *Prison Break* and *Free Willy 2*, there was 100 minutes of footage overall.

> **"The video had to be converted to a very limited color palette, resulting in heavy pixels and banding"**
>
> Lodewijk Coen

» [Mega-CD] *Midnight Raiders* was as Nineties Hollywood as it could be, complete with exploding choppers.

was the one who rebirthed *Sewer Shark*, working day and night to redesign the game on a new platform from raw movie footage. The video had to be converted to a very limited color palette, resulting in heavy pixels and banding. I think a palette of 16 colours was set aside for the UI and 200 or so for the video."

Both games sold well and *Sewer Shark*, with 100,000 sales, was bundled with the Mega CD shortly after its North American release in October 1992. It was a mega triumph, grossing about $18 million at retail, and a vindication of Tom's determination to make a success of FMV. Yet trouble wasn't too far away.

Night Trap caught the attention of US Senators. The game was deemed to be ultraviolent: "In the scene played at the news conference, the attackers get their screaming victim and attach the blood-draining device to her neck with a high-pitched drilling noise," a newspaper reported on 2 December 1993.

Senator Joseph Lierberman led the issue. "We're not talking *Pac-Man* or *Space Invaders* any more," he said, adding that he would, if possible, ban the likes of *Night Trap* and *Mortal Kombat* from being sold. Yet *Night Trap* wasn't all that violent and neither did it contain sexual content and nudity despite such claims. "It was political grandstanding," says Mark. "Most of us thought they were comical – the game and the politicians who called it out as an example of a violent videogame."

Even so, retailers such as Toys 'R' Us and the Kay-Bee chain took it off the shelves and Sega decided to

pull the game itself in January 1994. The game was later rereleased with new box art and it was also ported to the Sega CD 32X, 3DO, PC and Mac. But the furore had led to the creation of the Entertainment Software Rating Board in September 1994 and a mass realisation that games were not always aimed at children.

In the meantime, Digital Pictures had ploughed on developing new titles, among them a gaming series called *Make My Video* which let players take a song by INXS, Kris Kross, or Marky Mark and the Funky Bunch and produce a new music video for it using preshot clips and 'snazzy' special effects. None of the games sold or indeed reviewed very well, leaving Digital Pictures out of pocket. Lodewijk believes the problem was down ▶

CORPSE KILLER

■ Although Digital Pictures' early FMV titles were made for the Mega-CD, *Corpse Killer* also got an outing on other CD-based consoles including the Saturn, 3DO and the Mega Drive's 32X. Each version – aside from the Saturn – could be played using a lightgun. But while there was a real danger that blasting away at dozens of zombies could become rather repetitive, it was kept alive by some neat twists. Blast the Shadow Men when they were darkened, for instance, and it would cause you to lose health.

TIMELINE

1987 ■ Production of *Night Trap* for the Control-Vision console begins.

1988 ■ Development of *Sewer Shark* starts.

1989 ■ Hasbro cans the Control-Vision console.

■ Executive producer Tim Zito buys the assets for both games.

1990 ■ Sega approaches Tom Zito to create games for its Mega-CD add-on.

■ Digital Pictures is formed.

1991 ■ Conversions of *Night Trap* and *Sewer Shark* to Mega-CD are released.

■ The Make My Video series based on music videos is launched.

1992 ■ US Senate hearing on violent videogames cites *Night Trap*.

■ Fresh games *Ground Zero: Texas*, *Prize Fighter* and *Double Switch* are released.

1993 ■ Basketball game *Slam City With Scottie Pippen* and *Corpse Killer* launch.

■ *Night Trap* appears on 32X and 3DO.

1994 ■ *Supreme Warrior* and *Quarterback Attack* with Mike Ditka are published.

■ *Maximum Surge*, a game which overlaid FMV on graphic backgrounds, is cancelled.

1995 ■ Digital Pictures closes.

0:40 ORANGE

BATHROOM
Possible 5
Captured 0

» [Mega-CD] The writing and acting in *Night Trap* was rather cheesy but the game was innovative to a point.

» [Saturn] Jeremiah Birkett played Winston in *Corpse Killer*. He's since starred in movies including *LA Confidential*.

▶ to the limitation of the medium. "Too low-res video, too low-res interface, an editing timeline with tiny video screens, low-res audio – it was a tour de force that we even did this," he says.

Better was Digital Pictures' second wave of games, among them *Ground Zero: Texas* and *Double Switch*. Flush with cash from *Night Trap* and *Sewer Shark* ("Our funding came from a combination of revenues and investment," reveals Mark), Digital Pictures spent $2 million making *Ground Zero: Texas,* using a full Hollywood film crew (the game also starred Steve Eastin, who had appeared in many TV shows including The A-Team and TJ Hooker). "Producing video, including hiring talent, was a major component of the cost of our games," Mark says.

Despite the large investments needed, the company was growing fast. It moved to larger premises on Page Mill Road,Palo Alto. "We also worked on Sand Hill Road in Menlo Park, in the Quadrus campus, surrounded

by beautiful nature in the foothills and amazing art," Lodewijk adds. Digital Pictures had hired around 80 people at its peak in 1993. "We kept on growing, developing new concepts and titles," Lodewijk says.

The company approached its games in much the same way. "Usually we'd start with off-site meetings – gatherings in nice remote settings that were conducive to creativity," Lodewijk remembers. "Everyone from the receptionist to chairman would actively participate and we'd filter the best concepts in a democratic way." They would then create concept boards ("I sometimes hired story board artists especially for those jobs,") and these would be laminated "after they were colour printed on incredibly slow inkjet printers".

"Sometimes movie snippets were shot, anything to make a concept as clear as possible," Lodewijk continues. "They were then either taken to possible investors or tested on future audiences via focus groups." Some of this was done in-house. "We had

great talent on staff like Cuyler Gee who I collaborated with for so many years," Lodewijk remembers. Steve Russell also took a job at Digital Pictures. "He had a great game sense and he was a good development manager," Mark explains.

That said, some of the games retrod themes from Digital Pictures' games. *Double Switch* was very similar to *Night Trap*, for instance, having players study cameras to avoid or set traps (I briefly met Deborah Harry on the set," Lodewijk says). But others were rather unique. "*Prize Fighter* was revolutionary," argues Mark of a black and white FMV game that had gamers playing as The Kid from a first-person perspective, fighting in the ring against various opponents.

"I just remember focusing on how the graphic overlays, sprites and interface would work with the filming to get a 'natural' effect," says Lodewijk. "For *Prize Fighter,* I had to go to the movie set in order to help film the boxing gloves for the first person point-of-view boxing moves. Those were shot separately on a green screen, to be extracted later and turned in to sprite overlays for the POV fighting scenes. The idea was for the player to feel that he was really fighting the opponent which was different to, say, *Street Fighter* where you fought sideways."

THE DNA OF SIERRA ON-LINE

FULL-MOTION VIDEO
■ Digital Pictures aimed to bridge the gap between film and games by developing cinematic titles that relied on prerecorded video files. The technique was a few years old at the time, but it was still seen as cutting edge. It was also expensive, ensuring many games cost millions of dollars to make.

LOYALTY TO STAFF
■ Those who worked at Digital Pictures were told their jobs were safe unless they made a whopping mistake. That's because Tom Zito decided to cede the right to fire them and he told the New York Times that his aim was to attract and keep talent. Each employee was also paid more than they asked for.

CONTROVERSY
■ Even though the violence in *Night Trap* was mild, it didn't stop Senators Joseph Lierberman and Herbert Kohl from advocating banning videogames in 1993. It caused *Night Trap* to be temporarily withdrawn from stores (but not before the publicity saw sales soar). It also led to the creation of North America's ESRB.

OVER-THE-TOP ACTING
■ It's fair to say that most (but not all) of the acting in many of Digital Pictures' games would not have kept anyone awake at night drafting an Oscar-winning speech. But that was part of the charm, lending a somewhat cheesy, B-movie air to the proceedings. The games clearly didn't take themselves seriously, either.

> ## "Our games for the PC and Mac were the best quality and not just because they were not on a TV screen"
> Lodewijk Coen

There were other sporting renditions such as the basketball game *Slam City With Scottie Pippen* that had 3,000 film shots on four discs and, towards the end of the company's life, Digital Pictures created the American football title *Quarterback Attack*. The former, however, was one of just a handful of titles created for a Mega-CD-32X set-up. It was also released for MS-DOS. "Our games for the PC and Mac were the best quality and not just because they were not on a TV screen," Lodewijk says. "There was no bleeding of colours, and there was better resolution and stable images."

By the mid-Nineties, however, FMV was feeling tired. Digital Pictures released the FMV shoot-'em-up *Corpse Killer* in 1994, the same year as the fighting game *Supreme Warrior* which was shot at the iconic Shaw Brothers film studio in Hong Kong. It also dabbled with a children-friendly title called *Kids On Site* that allowed players to mess around with various building site machinery. Yet while lots of money was being poured into the games, Digital Pictures felt it had to come up with something fresh.

To that end, work started on *Maximum Surge* for the 3DO, Saturn, PC and Mac. Although it used FMV (and featured Yasmine Bleeth, who played Caroline Holden in *Baywatch*), the production method was different. Instead of taking standalone FMV as before, the game used up to four layers of video-sourced graphics on the screen at the same time. This allowed the developer to seamlesssly combine the video with computer graphics while ensuring enemies could attack in any combination, and it was, said critics who saw it, a triumph for the team and producer Larhroum.

And yet despite the ambition and the interesting comments by Tom that it was "really the first game in which we used the camera as a tool rather than as a recording device", it was never released. The aforementioned focus groups came up with a bunch of suggestions and the game was put back six months to implement them. Within that time, Digital Pictures ended up closing. It was 1996 and the loss of appetite for FMV in the Sony PlayStation era of impressive 3D graphics helped killed the company.

Lodewijk also believes the writing was on the wall for full-motion video because of blockbuster games like *Doom*. "*Doom* was relatively cheap to make, and it had an immediate following. The internet also allowed for online games, however primitive it might have been in the mid Nineties. With our games, the movie part was very expensive, the game playing time was limited, and having the watch the same video sequence over and over again to be able to play the game to the end was boring after a while."

Indeed, even Tom Zito knew the end was near when he was interviewed in *Next Generation* magazine in October 1995, agreeing that the days of "old FMV" were over and that it was time for a rethink. That was coming with *Maximum Surge* but quite what the wider gaming world would have made of his new version of FMV is one that has now been lost to time. ★

» [Mega-CD] *Double Switch* took many of its cues from *Night Trap* and it starred teen idol Corey Haim.

TOM ZITO
■ Tom Zito's desire to integrate film with gaming began in the mid-Eighties when he pitched the idea to Atari founder Nolan Bushnell. Turned down due to a lack of finances, he went to Hasbro, suffered a second blow, yet pushed ahead with the concept by cofounding Digital Pictures and overseeing each game.

SEGA CONSOLES
■ Most of Digital Pictures' games appeared on the Mega-CD but a notable exception was *Quarterback Attack* with Mike Ditka, a game that appeared on the PC, 3DO and Saturn. The fact that it was on the latter console, however, further cemented the strong link and relationship between the developer and Sega.

WHERE ARE THEY NOW?

TOM ZITO
■ Following Digital Pictures, Tom Zito harked back to his older career as a Washington Post rock critic and set up a new company called Garageband in 1999 which aimed to give a promotional leg-up to up-and-coming bands. He then served as chief executive officer of Integrated Media Management until 2009. Today, he runs a web-based company called I'd Watch That, which enables TV viewers to vote on the shows that they would like to see get made for TV.

LODEWIJK COEN
■ After leaving Digital Pictures, Lodewijk Coen became a senior art director at Microunity Systems in Sunnyvale, California and then moved to the Netherlands to become a lecturer in new media and typography at the Academy of Fine Arts in Maastrict. He has lectured at many institutions in the Netherlands, Finland, America and Belgium and he is currently the principal chief executive officer at a company which seeks to look at the link between wellness and art.

MARK KLEIN
■ Over the past couple of decades, Mark Klein has been involved in internet security products, he has cofounded a nationwide voicemail company called eVoice which was bought by AOL, and developed many consumer and enterprise products and services. He is currently the chief data scientist at a company called Averon.

ROB FULOP
■ Rob Fulop founded a company called PF Magic in 1991 which became best known for the virtual pet games *Dogz And Catz* – deliberately producing cute interactive games because he was embarrassed at the controversy over *Night Trap*. He sold PF Magic to Mattel in 2000 and later joined Playfirst as a senior game designer. He has also worked for Videobrain and Zynga. Today, Rob is currently employed as the design director for Hands On Media, overseeing the *World Poker Tour* online games. He also joined the indie rock band Bourbon Therapy in California in 2015 as the pianist/keyboardist.

Game Boy Player Fact

■ The official software is no longer the only way to use the hardware – the homebrew Game Boy Interface is also available.

Game Boy Player

» PLATFORM: GAMECUBE **» RELEASED:** 2003 **» COST:** £39.99 (LAUNCH), £60+ (TODAY, WITH SOFTWARE DISC)

t's a nondescript little thing, the Game Boy Player – a slab of plastic that sits under your GameCube and gives it dimensions closer to its advertised cube shape. But that little device contains a set of Game Boy Advance hardware and opens up the access to every Game Boy, Game Boy Color and Game Boy Advance game, an enormous library of classics liberated from the questionable screens and limited battery life of their handheld homes. To compensate for the variation in display between different TV sets, screen options including scaling and filtering are included.

When playing on a Game Boy Player, it's possible to use a standard GameCube control pad, or you can use a Game Boy Advance to GameCube link cable to hook up a Game Boy Advance or Game Boy Advance SP as a controller instead. Link cables and even the wireless adapter are supported too, allowing for multiplayer functions to be retained as if you were using a regular GBA. Though games of all regions work on the Game Boy Player and the hardware is universal, you must possess the correct Game Boy Player software for your GameCube's region. ✱

THE MAKING OF
HITMAN
CODENAME 47

THE HITMAN SERIES MAKES USE OF SUCH AN ELEGANT FORMULA IT'S HARD TO IMAGINE IT ANY OTHER WAY. BUT THE ORIGINAL ENTRY IN THE SERIES COULD HAVE BEEN A VERY DIFFERENT GAME, AS JACOB ANDERSEN REVEALS

Words by Edward Love

Hindsight is a funny thing. Today, the *Hitman* series is beloved, with a calculated antihero and a tried-and-tested stealth action setup. Every time you slip into Agent 47's dark suit you know you're gearing up for a succession of guilty pleasures, from filching disguises to assassinating key targets, a formula so good that it has had its share of copycats since. But like any great idea, IO Interactive didn't crack the *Hitman* code in one sitting. It took hard work and refinement to crystallise the vision, and as we have discovered, a thousand pieces needed to fit together.

The truth is that IO Interactive nearly didn't make *Codename 47* at all, and it originally intended to make

» [PC] When you're in a mobster's home surrounded by his goons, you better make sure you're in a disguise.

a simple shooter that would pave the way for bigger and better things. The company was a joint venture between Reto-Moto, a Danish development house, and Nordisk Film studio. The former wanted to make a fantasy MMO they had dubbed *Rex Dominus*. The latter was hesitant. "One of the marketing guys at Nordisk Film persuaded us to stop development on *Rex Dominus*," recalls Jacob Andersen. "We were asked to prove ourselves with a simple shooter first."

A run-and-gun action game would indeed be quicker to create and it would give Jacob and his team the leeway to get back to their world of might and magic. So they changed tack, drafting storyboards for an action game based on John Woo movies like *Hard Boiled* and *The Killer*. You'd play an assassin in a suit icing Chinese mafia types, hardballers spitting fire and fury.

Many of IO Interactive's workers had cut their teeth making Mega Drive titles in Los Angeles for Scavenger, Inc, but this new game would be built for the PC. Why? "Well, it was hard for us to get hold of development kits in the new setup," Jacob recalls. "On top of that, 3D hardware was beginning to appear for the PC, which made it extremely interesting to develop for."

The Glacier engine was built and IO spared no expense. "Since killing was the main theme of the game, we wanted to do something special," Jacob says. "Standard 'death animations' just looked too static so some of the coders tried to see if they could use real-time inverse kinematics for the falling bodies. The first versions ran terribly slowly until one of the programmers figured out a way to fake the whole calculation."

As fate would have it, IO Interactive was introducing proper ragdoll physics into the fold, which is one of the

» [PC] Hit 3 on the keyboard to switch to the dynamic camera.

» [PC] Sometimes your best-laid plans fall by the wayside.

first examples of the technology. In other games around the same time, enemies would fall down in a canned animation, but IO's shooter was different. Enemies collapsed based on the wound and the environment.

This technology caught the eye of Eidos, and in particular, Jonas Eneroth, who would go on to executive produce *Codename 47*. "The ragdoll physics really opened up opportunities to explore a shooting game that went beyond a run-and-gun approach," Jonas tells us. "It was the first time we [at Eidos] had seen ragdoll physics as a key gameplay element. It was very much a new and key differential feature." Suddenly Jonas sniffed the possibilities. Imagine moving realistic dead bodies around a map and using this as a source of tension? "*Hitman* featured a number of gaming firsts, including deformable cloth and plants, but its ragdoll physics enabled a gameplay shift to the slower, more thought-out gameplay that defined the series."

That wasn't the game IO Interactive was intending to make, mind. It was looking to do a simple shooter and

move on. The earliest storyboards depicted an assassin jumping over tables and shooting out fish tanks. The John Woo influences were writ large and *Hitman* was destined to turn out like something close to 2007's *Stranglehold*. But Jonas encouraged Jacob and the team to tone down the action and focus on a methodical experience. Serving as executive producer, he brought learnings from projects like *Thief* and *Deus Ex*. The art of stealth was, to his mind, worth emphasising.

The pieces began to fit together. In the game, players slip into the polished shoes of Agent 47, a genetically engineered killer with 47th chromosome and a lab rat's barcode. He'd be able to don disguises, kill enemies unseen and move bodies out of the path of other characters. Levels are open-ended, with the prime target hidden, and a number of NPCs standing in your way. Stealth is a key to victory, and to make matters harder, there'd be no way to save during a mission.

Thanks to its initial work on *Rex Dominus* as well as its prior experience making games, IO was ▶

» Jacob Andersen worked on the first four *Hitman* games.

▶ comfortable creating open worlds that could run on low-end PCS. "We built a master system out of old-school tile maps we had used in a previous game, A-M-O-K," Jacob recalls, "as well as a simple module system that we had used in our 1996 title *Scorcher*. If I'm not mistaken, our system is used today when making maps for *Hitman*."

The first levels take place in Hong Kong, a hangover from the early storyboards. Agent 47 has escaped the lab from which he was hatched and is now working for the International Contract Agency. His target is Red Dragon Triad leader Lee Hong but smaller targets lie in wait first. The levels are bigger than your average shooter and were state of the art for the time as well. "I remember making a crazy animation for the aquariums in the Hong Kong restaurant, using deformations in 3D Studio Max and then 'baking' them out as vertex animations," Jacob recounts.

The action shifts to Columbia where drug lord Pablo Ochoa is in your sights. This a nod to *Scarface* and features an Agent 47 clad in war paint and military overalls. A shorter excursion through a Hungary hotel,

» [PC] Planning your attack is one of the juiciest aspects of the *Hitman* experience. In that regard, there's a map to help you out.

"CODENAME 47 REALLY SHOWED THAT WE WERE CONSOLE DEVELOPERS"

Jacob Andersen

based on Hotel Gellért, follows. "The mercenary, Frantz Fuchs, is modelled on a real Austrian terrorist named Franz Fuchs, a really scary guy, that I read about in the newspaper when designing the map," Jacob says.

Eventually, *Hitman: Codename 47* comes full circle and you end up where you started: in the lab, face to face with your creator, a dastardly doctor by the name of Ort-Meyer. B-movie shlock is served up in spades culminating in a face off against the mad doctor and his army of clones. 47 prevails. Or does he? To say *Codename 47* is punishing is like saying the Bugatti Veyron is just a car. True, but a gross understatement as well. The unpredictable NPCs are like drunk chess pieces capable of tottering across the board without warning, and for another, it's impossible to save mid-level, meaning the odds are always stacked against you.

"*Codename 47* really showed that we were console developers," Jacob admits. "We didn't consider a save game option. On consoles at the time, you were just given a code that would allow you to skip levels that you had already completed. Also, the keyboard layout was all messed up. Still, one good thing we brought from consoles was the 3rd person perspective. All character-based games on consoles had to be 3rd person. 1st person was a PC-only thing at that time."

Hitman shipped at the tail-end of 2000, a markedly different game from the one that had first been conceived. With state-of-the-art ragdoll physics and gorgeous graphics it was a technical darling, but critics were divided on whether it was worth the

price of admission. Some loved it, some felt it was too punishing, but Eidos spied the potential for more polished and user-friendly sequels to come.

Hitman 2: Silent Assassin** shipped in 2002. This time, the PS2 and Xbox were the focus, though the PC and GameCube got versions, too.** "Now that the main platform was PlayStation 2, we felt more at home," Jacob remembers, and it feels like a more polished, more assured effort, though hardcore fans scoffed at the introduction of a mid-level save system. The controls were improved and the team tried to fix AI niggles, but NPCs found new ways to misbehave. "Many have tried to fix the AI since and all have failed," Jacob smiles. "It just has to have those odd moments, otherwise it wouldn't be *Hitman*."

That straight shooter that was supposed to pave the way for *Rex Dominus* had, well…turned into something rather momentous. Today, Agent 47 is the star of celluloid and the hero of several sequels in one of the biggest franchises in PC and console gaming. There have been six full-fledged titles and two Hollywood movies. Not bad for a "simple shooter".

Jacob Andersen would eventually lend his expertise to four of the *Hitman* titles. In addition to *Codename 47* and *Silent Assassin*, he helped develop *Hitman Contracts* (2004) and series favourite *Blood Money* (2006). Today he works at the reformed Reto-Moto with many of the original IO crew. The team is hard at work on *Heroes And Generals*, a free-to-play shooter and strategy

CHRONICLES OF A HITMAN

HITMAN 2: SILENT ASSASSIN
2002

■ *Hitman: Codename 47*'s first sequel was a cross-platform release and a runaway success, appearing on the original Xbox, PS2, PC and later the GameCube. It was a far more polished and assured game than *Codename 47*; one that upped the production values and laid the groundwork for the *Hitman* series we know today.

HITMAN: CONTRACTS
2004

■ A bit of an oddity, this one. *Hitman: Contracts* was something of a stopgap between *Hitman 2* and *Hitman: Blood Money* and it involves a series of flashback contracts, some of which retread ground covered in *Codename 47*. Déjà vu is unsurprisingly in abundance with this one.

HITMAN: BLOOD MONEY
2006

■ Ask a lot of fans what their favourite game in the series is and they'll likely point to *Blood Money*. It represented a huge leap forwards, giving players a dizzying number of ways to complete a mission and rewarding crafty players in spades. There are plenty of reasons to dip back in, even all these years on.

» [PC] A thousand unsuspecting chefs have died at the hands of 47's fibre wire.

game that does a lot of things that were not possible in *Hitman*. In Jacob's words: "Multiplayer, a persistent online world and action, strategy and RPG elements - all in one game." Perhaps *Rex Dominus,* after all this time, lives on with a new name.

As for the man that helped steer *Hitman* in the direction we've all come to love, Jonas Eneroth worked on some of the biggest games of the Nineties and Noughties. He's now enjoying a change of pace in Malta as the cofounder of Karmafy. In Jonas' words: "Karmafy is a socially responsible charity platform for game developers to support good causes in their games." Interested? You can find out more at karmafy.com.

The story of the first *Hitman* is the story of boundaries being pushed to the extent that a new game was spied and developed. The story of *Hitman* is of best-laid plans falling at the wayside, and something new emerging in its stead. The classic games you know and love were never straightforward to make. No project ever is, no act of collaboration ever can be. Even the birth of a no-nonsense assassin had several twists and turns and forks in the road. But the good news? We got there in the end, and *Codename 47* is a fitting blueprint for a truly wonderful series that endures to this day. ✱

BECOME THE ULTIMATE HITMAN
The best methods to assassinate your target

FIBRE WIRE
■ Make good use of Agent 47's go-to weapon when he's trying to be silent. Beware, though, because having it out in open will cause guards to shoot at you. It's a design decision that's not logical – because surely Agent 47 can hide it in his sleeve? The quirk was eventually fixed for *Blood Money*.

KITCHEN KNIFE
■ The early Hong Kong levels feature a fair few kitchens and their share of chefs. Ergo, there are plenty of kitchen knives are lying around for Agent 47 to snap up like a kleptomaniac murder machine. Sink one into the flesh of the nearest cook and steal their uniform while you're at it.

SNIPER RIFLE
■ In *Codename 47*, you can take out enemies from afar with either the Blaser Jagdwaffen R93 or the Walther WA2000 sniper. Just make sure you pack the deadly weapons away in their trusty suitcase and leg it out of the area once you're done – a good hitman doesn't leave a trace... other than the bullet, of course.

MINIGUN
■ Why not throw caution to the wind with the minigun? It becomes available near the end of *Hitman*, starting in the Plutonium Runs Loose mission where it can be bought for $10,750. It's also located in a maintenance room in the final level, Meet Your Brother, so use it to dispose of Ort-Meyer in style.

SHOTGUN
■ This would be emphasised even more in later games, but *Codename 47* is open to the way you want to play it, and if that means waging war *Rambo*-style with a shotgun in hand, so be it. For your bloodthirsty efforts, you will be rewarded with a cloud of giblets. Very *Soldier Of Fortune* indeed.

HITMAN: ABSOLUTION
2012
■ Rumour has it development on *Absolution* was tricky, in part because the game was trying to be several things at once. Linear console shooter? Tick? *Hitman* of old? Tick? Palatable to new players and veterans alike? Tick. In the end, the smaller, more restrictive levels felt like a step backwards after *Blood Money*.

HITMAN
2016
■ *Hitman* goes episodic. Set over six instalments with jaunts to Paris, Colorado, Bangkok and Marrakesh, 2016's *Hitman* is the most freeform example of the series yet. In fact, standout episode *Sapienza* feels like a true realisation of the *Hitman* formula with a truly open playground to explore.

PC CD-ROM

HITMAN
Codename 47

EIDOS
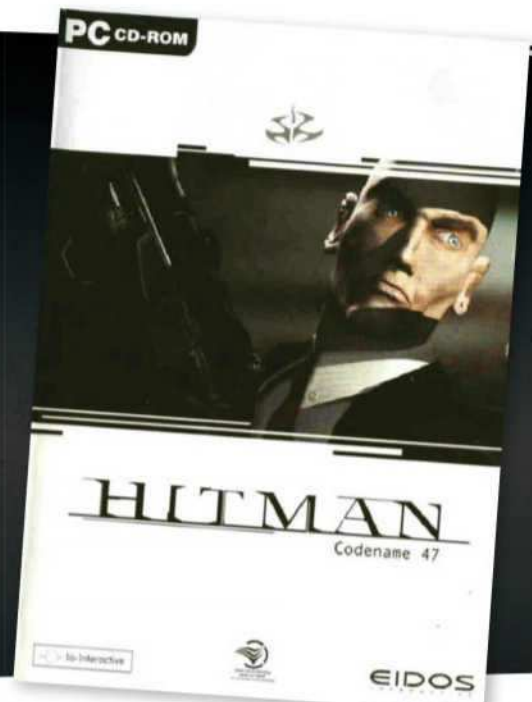
Minority Report

PLAYSTATION 2

With a library of literally thousands of games, Sony's second console is home to plenty of interesting games that may have passed you by. Join Nick Thorpe on a quest to find some of those diamonds in the rough…

» [PS2] Yes, Rena's in the bath. Yes, she attacks Mr Moskeeto with the shower. No, you don't see anything, filthmonger.

» [PS2] Pick-ups like these heart pieces are absolutely tiny, so you're going to have to hunt high and low for them.

MR MOSKEETO

■ DEVELOPER: **ZOOM INC** ■ YEAR: **2001**

■ **Maybe it's because we're British, but we're pretty sure that summer is the worst of seasons.** People get extremely excited only to be disappointed by weeks of drizzle, broken by a singular week of uncomfortable heat and humidity. Throughout the whole miserable ordeal, we are tormented by bugs, which give us nasty, itchy bites. All of this would be utterly irredeemable abuse by Mother Nature, were it not for the fact that such traumatic situations inspired the development of Mr Moskeeto, released on Eidos' short-lived Fresh Games label.

Each stage places the titular bug in a room with a member of the Yamada family, whose blood you need to drink to survive for the winter. Whether it's Kenichi, the goofy dad of the family, his more sensible wife Kaneyo or their teenage daughter Rena, the family member will quite happily bumble about and mind their own business, until you start to fly about the room and cause havoc. You can go straight for any exposed skin, or attempt to expose vulnerable areas by causing the person to move. This is achieved with the use of various objects, such as light switches and TV remotes. Once you land on a person, you can hit R3 and start rotating the right analogue stick to start drinking. While you drink their blood, you need to keep an eye on the speed at which you're drinking it, and the overall stress level of your host (which may result in being swatted – an autokill). Fill up the necessary number of tanks from each extraction point and the level is over. This sounds simple, but we've not yet covered the obstacles to your blood-sucking exploits.

Environmental hazards include air conditioners to destabilise your flight, insecticides, bubbles which loudly pop and more. However, the biggest hazard to your survival is the Yamada in the room. If you are spotted, the family member's stress level will increase until a battle scene triggers. The massive foe gets up and stops whatever they were doing, in order to attack you with their hands, feet, bug spray and even boiling hot water from a shower head. Unlike the blood-sucking sequence, being hit here doesn't instantly kill you, but you'll need to avoid taking too much damage while you try to hit relax points to calm your host down. Unfortunately, Moskeeto's not so easy to manoeuvre and sometimes you will trigger battles or get hit simply because your guy isn't quite agile enough.

IF YOU LIKE THIS TRY....

KA 2: LET'S GO HAWAII
PS2

■ This import-only sequel to *Mr Moskeeto* sees the Japanese mosquito head off on holiday to Hawaii with the Yamadas. With a new American mosquito buddy, they torment the Yamadas and their hosts, the Browns. Some of the dialogue is even in English, so you'll be able to understand at least a portion of the story.

TOY COMMANDER
DREAMCAST

■ If you want to fly around a gigantic household environment without needlessly irritating a small family in the process, this military-themed game should be right up your street. As well as flight missions in toy planes and helicopters, ground-based objectives can be achieved with miniature tanks and RC cars.

HAUNTING STARRING POLTERGUY
MEGA DRIVE

■ If tormenting families and causing havoc is what draws you to *Mr Moskeeto*, EA's supernatural revenge game offers many of the same thrills. You control Polterguy, a teenager killed by one of Vito Sardini's defective skateboards, as he possesses household objects to scare Vito's clan out of four different homes.

» [PS2] That red light on Kenichi is a 'relax point' – attack it and he'll calm down and leave battle mode.

There's a budget feel to the affair and it's short, but with a second loop and lots to collect you can wring out more value if you please. The main attraction is the strangeness of the whole experience – being the fly on the wall is appealing, and just watching the family has its own charm. The game has a sense of humour, too – pregame screens include a parody of *Resident Evil*'s warning, and the cutscenes are pretty funny, too. It's surprising that any publisher took a chance on bringing *Mr Moskeeto* to the western markets, but we're glad that Eidos did.

IN DEPTH

FILL UP
■ This bar shows how full your current blood tank is. You have a certain amount of blood that must be collected during each stage, as indicated by the nearby tank graphics.

DEEP PURPLE
■ This smoke isn't on the water, and it isn't something you want anything to do with in this game – it's pesticide, and will hurt Mr Moskeeto if he happens to fly into it.

KEEP YOUR COOL
■ This indicator shows how stressed your target is. When green, you're free to be aggressive, but as it moves to red the danger of being swatted or entering battle increases.

ACTUAL SIZE
■ Mr Moskeeto is pretty accurately proportioned – he's only barely visible on the back of Kaneyo's leg, which is why a zoomed-in view is shown in the top-right of the screen.

Minority Report

GITAROO MAN

■ **The PS2 is home to a number of underrated music games, and** *Gitaroo Man* **happens to be one of our favourites.** U-1 (a Japanese pun for Yuichi) is a loser schoolboy who is transformed into the heroic Gitaroo Man after being gifted a Gitaroo by the talking dog Puma. His job is to fend off a variety of enemies in musical battles using the Gitaroo.

Battles have a few steps. Firstly, there's a charge phase, in which you build your life bar. This involves following a directional track with the left analogue stick, and pressing a button in time to the on-screen prompts. Then, in the battle proper, you'll use this process to attack, and defend yourself by hitting the four main controller buttons as icons fly from the edge of the screen to the centre. You'll alternate between these attack and defence phases until either U-1 or his opponent is defeated.

While the in-game action is well designed, it's the music you play to and the story that unfolds that you'll remember. The soundtrack from the Japanese duo COIL is excellent, and the game's signature track *The Legendary Theme* deserves to be mentioned in any conversation about the greatest music in videogames – particularly the brilliant acoustic version, which plays during a sentimental stage in the middle of the game.

Gitaroo Man didn't sell very well originally, and the current going rate is £15. This price is already starting to creep up as the game gains popularity via word of mouth, despite the existence of a much cheaper PSP conversion. Thankfully, the developer lived on to give us *Osu! Tatake! Ouendan*/*Elite Beat Agents* and the popular *Lips* series of Xbox 360 karaoke games.

» [PS2] Best level in any music game ever? Maybe – it definitely runs Parappa's toilet stage close.

» [PS2] Spinal Tap would have loved lightning-shooting guitars. Thank the gods nobody let the group have any.

MORE GAMES TO PLAY

» FIRE HEROES

■ A fire has broken out at the newly built skyscraper Clayton Tower, and as a firefighter, policeman or architect you've got five real-time hours to put out fires, rescue people and solve the mystery of the disaster. Each character has nine unique chapters to play, as well as multiple endings and a complex web of relationships to unravel across the three stories, so this cel-shaded action game provides plenty of long-term value.

» X-TREME EXPRESS

■ You might wonder what a train racing game entails, given that you don't need to do any steering. Speed management to avoid derailing is a key consideration, as is track selection – it's possible to block off your opponents. Additionally, pulling into a vacant platform at the end of the track is crucial. There's clearly some novelty value here, but you'll find yourself pining for a less on-rails experience before too long.

» FREAK OUT

■ Demons have possessed Linda's dozen sisters – but luckily, one also possessed her scarf and gave it the ability to grab and stretch objects. Now she has to head out and rescue her sisters by exorcising the demons in a series of boss battles. This isn't one of Treasure's more celebrated games, but it is an interesting experiment – all the bosses feel very unique, and the game employs some unusual visual techniques.

» MONSTER ATTACK

■ This is the first game in the *Earth Defense Force* series, which has transcended its budget beginnings to become a cult favourite. The premise here is simple: giant bugs are invading earth, and you are one of the army grunts tasked with stopping them, so pick up the biggest gun you can find and shoot them until they're all as dead as they can possibly be. It's even better fun in co-op, so conscript a friend if you can.

MICHIGAN: REPORT FROM HELL

■ PUBLISHER: **GRASSHOPPER MANUFACTURE** ■ YEAR: **2002**

■ **A mysterious fog has descended over Lake Michigan and Chicago, causing people to mutate into hideous monsters.** But instead of being some gun-toting hero or a young child fleeing in distress, you play as a camera operator, documenting the unfolding events as part of a TV news crew. By pointing your camera at interesting things and highlighting them, you'll draw the presenter's attention and increase your score in one of three areas: suspense, erotic and immoral.

This semi-passive approach to the horror genre is highly unusual, and extends beyond the limited direct interaction with your surroundings. If your reporter is killed during the course of a stage, you'll simply start the next one with a new reporter along for the journey – presumably, one who didn't ask too many questions about why the vacancy was open. In fact, it's entirely possible to finish the game without keeping any of your reporters alive and well.

It's a bit hard to take the game seriously at times, in part due to the hilariously bad voice acting – to call it 'B-movie' would be putting it kindly. However, the concept is undeniably unique. *Michigan* is an uncommon PS2 game in Europe, and demand for PAL copies is higher than normal due to the lack of an American release and the high profile of Goichi Suda (better known as Suda51), so prices tend to hover around the £40 mark.

» [PS2] Here's a survivor. Hint: she's not going to be a survivor for long…

» [PS2] Your presenter has answered the phone – are you going to follow her to try to find a lead?

RETRO STINKER

» SKY SURFER

■ **TOKA** ■ **2000**

■ Most of the pioneers of this extreme sport died in accidents. We would still rather try it for real than ever play this dreadful game again.

» RULE OF ROSE

■ DEVELOPER: **PUNCHLINE**
■ YEAR: **2006**

■ An attractive horror game, in which you play as Jennifer, a 19-year-old girl tormented by a group of malicious children known as the Red Crayon Aristocrats. Along the way, she's helped out by her dog Brown. The game was pulled from release in the UK, following attacks from Italian politician Franco Frattini and the Daily Mail which were dismissed by the Video Standards Council as 'nonsense'. It's rare and expensive in all regions.

» DOG'S LIFE

■ DEVELOPER: **FRONTIER DEVELOPMENTS**
■ YEAR: **2003**

■ In this game directed by David Braben, you take control of Jake, a dog whose crush Daisy has been taken by the dogcatchers. While trying to rescue her, he'll track down other dogs by scent, compete against them and recruit them to help him out. He'll also complete tasks for humans to earn bones, avoid dogcatchers and even mark his territory in the usual fashion. It's a bit simple, but the unique premise makes it worth a look.

» DETONATOR

■ DEVELOPER: **KADOKAWA SHOTEN**
■ YEAR: **2002**

■ Although it's ostensibly about building demolition, *Detonator* is an abstract puzzle game. With a limited supply of dynamite and a set number of turns to place it, you must find the most efficient way to ensure the total demolition of a building. However, you're limited by the shapes of the explosive charges you can place, as well as the structure of the building. This is an engaging puzzle game, but one lacking in spectacle.

» STEAMBOT CHRONICLES

■ DEVELOPER: **IREM** ■ YEAR: **2005**

■ Your protagonist, Vanilla Beans (yes, really) wakes up on a beach with amnesia and has to help out the similarly-aged girl that discovers him. So far, so JRPG. But then Vanilla gets access to cool customisable robots called Trotmobiles which he can use to do battle, and you can choose whether he becomes a hero or follows a villainous path. An interesting game, overlooked primarily due to a late and low-profile release.

"Sometimes I would spend hours just watching other people play, picking up techniques"
Andy Beale

Andy Beale

What cherished games would you take to the island?

Andy Beale has gone from making Spectrum games in Surrey to coding for consoles in California. He tells us about coin-ops and colour clash

Words by Paul Drury

I f you ever wandered into the arcade under the Wild Mouse rollercoaster by the beach at Little Hampton on the Sussex coast around 1981, you might well have spotted a wide-eyed teenager mesmerised by *Space Invaders, Defender* and all manner of arcade classics, staring over the shoulder of skilled players. "I hope I didn't creep them out," says Andy Beale, apologetically. "Sometimes I'd spend hours just watching other people play, picking up techniques… plus it was a lot cheaper than playing!"

Inspired by those great games of the golden age of arcades, he ordered a ZX81 and even drew the keyboard on paper so he could spend the long wait for Sinclair to dispatch his first computer constructively, practising his typing and learning where the keywords were located. This impressive preparation continued when Andy upgraded to a Spectrum on its launch in 1982. He had already drawn the graphics for various arcade titles in the back of his school maths book before the rubber-keyed wonder arrived, including those for a *Centipede* clone which would become his debut game, *Megapede*. The BASIC compiler he used to speed up his efforts was made by Softek which actively encouraged keen coders to send in their efforts for consideration. "I sent my *Centipede* game off and was staggered when I got a phone call from Tim Langdell. He wasn't an infamous character at this point! He offered me a contract – I was only 16 so I got my mum to look at it to make sure it was above board…"

A wise move, given Dr Langdell's subsequent business practices and courtroom battles, but back then, Andy really valued the support and encouragement he received. "I was the only electronics person in my family

and I would phone Tim up and confer about the game I was working on," he explains. "We'd talk about technical things or gameplay ideas. There was some collaboration and I really appreciated it back then because he was someone to talk to who got what I was doing. And getting royalty payments when I was still at school was great. It financed my first car!"

Andy suddenly found his school days were considerably brightened by the cash and playground kudos of producing Spectrum games. *Crash* magazine gave *Megapede* a decent review and so Andy set about cloning Stern's *Berzerk*, again released by Softek as *Robon* in 1983. Unfortunately, this one short-circuited a bit. "It looked the part, I think, but the gameplay was a bit lacking," sighs Andy. "It was flickery and you had to be pointing in the direction you wanted to fire. I did read the reviews of all my games and I can see why *Crash* didn't like this one."

Undeterred, his third release of a prolific year was a very competent version of Atari's *Missile Command*. Clever use of high-resolution graphics meant *Repulsar* presented the player with an imposing missile shower to repel, though given the original's reliance on a trackball to mount a successful defence, was replicating the controls effectively Andy's top priority? "To be honest, I started by trying to make it look like the arcade game," he explains. "Getting the graphics as close as I could was really important to me and I think I managed it with the missiles raining down. I did add a few things, like the flying saucer, but the game only had one base, not three. I did always try to get as much in of the arcade original as possible and not start by thinking about what I had to cut out."

Accepting constraints was, of course, the reality of anyone attempting to clone coin-op games for humble home micros in the early Eighties so before the year was out, Andy decided to work on a design of his own. "I began by drawing the main character and it stemmed from there," he says of *Microbot*, "I started with the graphics as that gets me into the mood of the game and I remember drawing all the pipes and thinking, 'This looks pretty good!'"

Microbot certainly showed considerable ambition over his previous arcade knock-offs, with your little robot flitting between 12 screens and balancing pipe maintenance with enemy blasting. "I always liked the idea of having lots of things you had to juggle," says Andy. "You can't be in two places at once so you have to prioritise."

Trivia

In *Theme Park* on the Mega Drive, players couldn't save their game due to EA's reluctance to add a costly battery-backed memory to the cartridge, so Andy encoded player progress in a string code to help mitigate the problem.

Andy started work on *Microbot* by fiddling around with graphics.

Praise for Andy

Here's what **Retro Gamer** has to say about Mark Pierce's work...

Darran Jones
It's very satisfying to learn that Andy worked on *Dead To Rights*, as I remembered completing it on my Xbox many, many years ago now. It features cool mechanics like bullet time and then of course there was Shadow, your faithful furry companion who would help you down bad guys. Silly, over-the-top fun.

Paul Drury
It's always a pleasure uncovering the stories of less well known game programmers and hearing how Andy went from bedroom coding on the Spectrum to working on big name titles in the USA was not only fascinating but felt a very British tale. To find he still has all the code for an unreleased Speccy game also made me smile.

Andy mulled over various names before settling on Microbot. We rather like Fix Trix
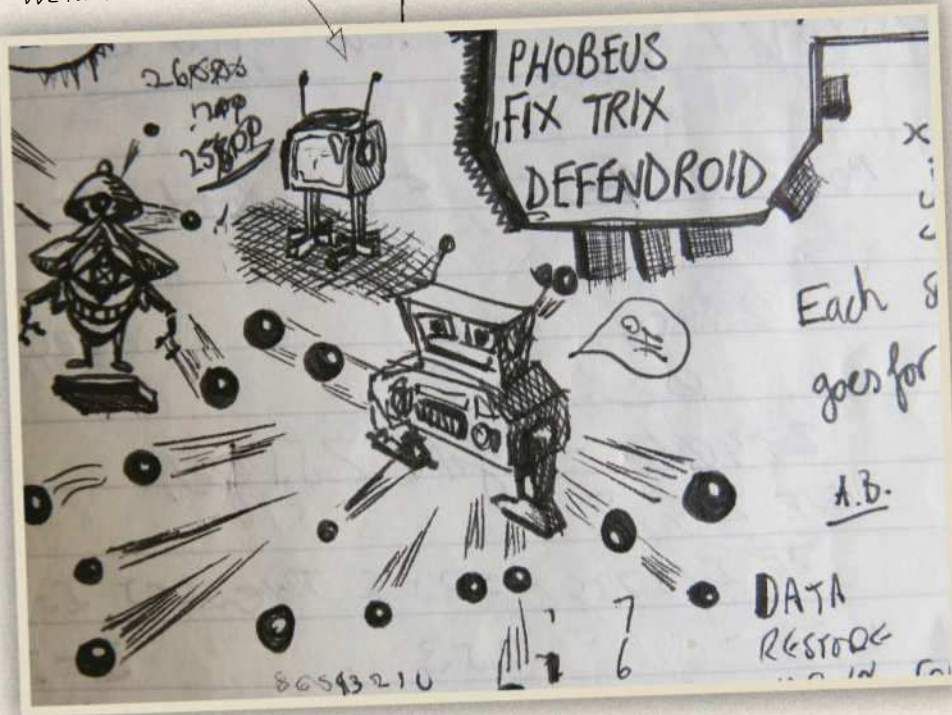
▶ Though it's very of its time, with some foes resembling *Manic Miner*'s wacky amoebatrons and a nod to the screen-flicking adventures of *Atic Atac*, it is an original effort with some sweet visual touches and a main character with legs, both literally and figuratively. As 1984 dawned, Andy began work on *Psytraxx*, which would take the robotic protagonist of *Microbot* and place him in a network of over a thousand rooms. "I wanted to create something that was in the realms of the Megagames," laughs Andy. "Imagine was talking about them so I wanted to scale up my idea to that size. I mapped out all 1,000 screens with my sister on the dining room table, putting it all together. We did them all one by one! The main thrust was the size. I wanted something that was bigger than most other games of the time, though most of the rooms did look the same."

Bigger isn't always better, though. Published through The Edge, Tim Langdell's new venture, adverts boldly declared a "new programming technique called Synergy" had allowed the creation of such a huge game world, though in reality, most screens were virtually indistinguishable. It did get Andy some press attention, with a feature in the November 1984 issue of *Personal Computer Games*, and coincided with him working over the summer at Tim Langdell's offices in Covent Garden, London. Though he continued working on his A-Level qualifications and eventually went off to University of Essex, Andy recognised that the burgeoning world of game

"I wanted to create something that was in the realms of the Megagames"
Andy Beale

development was where his heart truly lay, and he dropped out of his Computer Science degree during his first year. Besides, at this point in his life, Andy had high hopes for the new Spectrum game he'd been working on.

"*Quadron* was something I wanted to play. It had elements of *Defender*, *Robotron* and *Sinistar*, all those Williams games I loved. It was set in the Quadron complex, a multiscreen affair, and in the corners were four rocks that held these crystals. That was the *Sinistar* concept – certain aliens could mine these crystals and others called 'Fetchers' could grab them once they were mined and take them to these rooms where they could use them to convert into 'Meta-Fetchers', a bit like turning into mutants in *Defender*. I wanted it to be fast-moving and with different weapons you could power up like *Side Arms*. I touted it around to various software houses and Palace Software in London really liked it. Pete Stone who ran it gave me a contract to publish it so I carried on coding in my bedroom and when it was all ready to release, the producer came round. His tone was very different to previous visits and he said, 'Sorry, these games aren't doing well anymore so we're changing our mind'. I was gutted. I'd spent so long on it…"

It was late 1987, and with Andy recognising the 8-bit computer games market was on the wane, he began experimenting with coding on Commodore's Amiga and landed himself a day job in the arcade business, working for small, local companies such as Electrocoin and RS Coin. He applied his programming skills to various fruit machines and electromechanical game projects such as The Bomb, which tasked the steady-handed with diffusing an explosive through careful twisting of cogs, and the brilliantly named Beat The Cat, which involved no animal cruelty but much frantic wheel-spinning to save a mouse in jeopardy.

By the early Nineties, Andy was looking to move his way back into videogame development. Spurred on by his love of the Amiga, he went for an interview at Bullfrog, where he was offered the job of converting *Theme Park* to the Mega Drive, a console which shared the 68000 processor he was familiar with. "I said I would be up for that," smiles Andy. "Going to the office every day was a new concept for me. It wasn't that big – I think I was employee number 30 – and it was fun but professional. I was actually interviewed by Peter Molyneux and he did have this reputation ahead of releases of adding features during magazine interviews that weren't actually in the game. Everyone would roll their eyes and say, 'Peter's at it again –

Timeline

	1983	1983	1984	1995

MEGAPEDE
■ **YEAR:** 1983
■ **FORMAT:** ZX Spectrum
Andy began his trio of arcade clones for the Spectrum with this solid version of Atari's perennially popular insect shooter *Centipede*.

MICROBOT
■ **YEAR:** 1983
■ **FORMAT:** ZX Spectrum
Set inside a giant robot's head, your tiny robotic charge must manage multiple threats, from leaky pipes to fighting off enemies, with some light puzzling, too.

PSYTRAXX
■ **YEAR:** 1984
■ **FORMAT:** ZX Spectrum
Originally titled *Microbot's Revenge*, this sees the little chap rebelling against the Emperor robot. With over a thousand screens, it's big but a little bemusing.

THEME PARK
■ **YEAR:** 1995
■ **FORMAT:** Mega Drive
An excellent version of Bullfrog's rollercoaster and salty popcorn simulator, Andy managed to expertly tailor the gameplay to fit the console and its controller.

ombat flight   bombing of bases takes quite a while to get the hang of: you need to be quite

PCG•HIT ★ PCG•HIT

Psytraxx was programmed by 17-year-old Andrew Beale from Tolworth in Surrey. He wrote the game over a five-month period in between study for A-levels. Previous games for Softek include Microbot and Megapede.

Brain drain
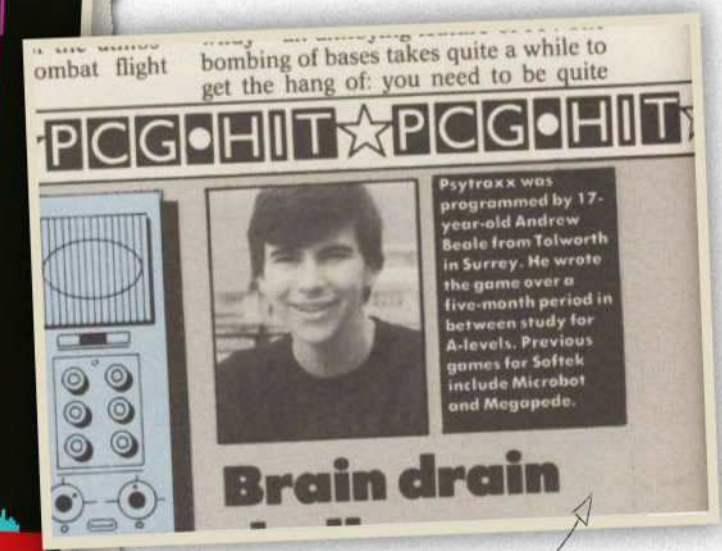
Close to the Edge

Given that Andy's early releases were all through companies owned by Tim Langdell, a man now best known for his overprotectiveness of the word 'Edge', we were keen to know what he was like when Andy knew him. "Tim was very charming and I was always appreciative of him understanding the technical side of what I was doing," Andy assures us. "I'm not sure if he coded himself but he seemed to understand the techniques." And was Tim as forthcoming when it came to royalty payments? Andy pauses before answering. "Well, it started off good and then kind of declined and turned into a struggle. But just receiving payments when I was still at school was cool. I got a few thousand for those Spectrum games, which wasn't fantastic but for a schoolboy it beat doing a paper round."

we're going to have to stick that in the game now!' He really went to town with the press."

Andy started at Bullfrog in November 1993 and worked on his version of *Theme Park* throughout the following year. He began by implementing the isometric display and making best use of the console's controller in lieu of a mouse. "They were still working on the PC version and I was working on mine alongside them," he explains, "and because that was still in flux, it made it tricky for me to convert it. Plus there were a lot of technical limitations on the Mega Drive, including much less memory, and at some points I did wonder whether it was possible. But I kept going, bit by bit…"

Andy's work on the theme park building simulator was impressive enough to be named as the Mega Drive's 'Best Strategy Game' in 1995, a source of enduring pride for him. After its release, he was immediately moved over to work on Sega's new CD-based machine, the Saturn, a console renowned for its complicated internal architecture. "I was intrigued by the Saturn," muses Andy. "It was powerful and had a lot of 2D capabilities and I liked the idea of the RISC processors, which I hadn't programmed before. Basically, EA came to Bullfrog and said they needed a game out by a certain date so could we do something quickly to help with their numbers that financial year?"

Bullfrog agreed and the result was *Hi-Octane*, a *WipEout* wannabe that never really emerged from its vapour trail. Andy handled the Saturn version, a considerable challenge given the console's shortcomings when it came to implementing 3D at a decent framerate, and he diplomatically concludes the game "could've been better with more time". On its release, Andy decided to take a break from the games business and follow a long-held dream of being a waiter. It was an adventure that took him to the exotic shores of Tenerife and the less salubrious floors of the Pizza Hut in Newbury. After almost a year out, he returned to Bullfrog to briefly work on the Saturn ▶

Beale on Beale

Andy picks his three favourite projects

■ QUADRON
I was creating something that combined a bit of each of those early Eighties arcade games I loved. It's a pity that it was never released. I still enjoy playing it today.

■ THEME PARK
It was a challenge fitting this big PC game into a 64KB Mega Drive cartridge but it was rewarding when a lot of people considered it the best version of the game.

■ XENA: WARRIOR PRINCESS
It was released in 1999 and by then we were really getting to grips with what the PlayStation could do. It was a good team and I had a lot of fun programming it.

Hi-Octane (Saturn) was a challenge to code and a challenge to play

Readers' Questions

Merman: What was your favourite hardware to develop on?

Probably the Amiga because it had a lot of flexibility, it had all those custom chips and it was accessible. It wasn't like the PlayStation 2 or Saturn where you had all these processors to worry about. It was smooth sailing programming-wise and you could get some really good results.

Northway: What development system did you use for making your coin-op stuff?

The guy I was working with on the coin-op stuff didn't really know what to get. We got started off with an Amstrad 6128 with an EPROM programmer attached before moving up to a PC with either an EPROM or Z80 emulator, I seem to remember.

Merman: Do you have a favourite Bullfrog anecdote or crazy anecdote from working in the office?

FEAST! You had to pound your hand on your desk while you chanted it and it meant we were all going off to the Hawaiian barbecue. It was a place in the Hazelmere area and occasionally we would all go there… FEAST was the signal!

FGasking: Have you still got the source code for any of your unreleased games?

Yes, I have all the code for *Quadron*. Of all the games I worked on, it's the one I most wish had been released. It was a labour of love and something that was a very personal project for me.

TT: Are there any other arcade games you would have liked to convert to the ZX Spectrum?

I wouldn't have minded having a go at *R-Type* or *Nemesis* or one of those scrolling shooters. That would have been interesting as scrolling on the Spectrum was quite complicated and a challenge to do well. It involved using some programming tricks so I would have liked that.

Merman: Do you play fruit machines yourself?

Occasionally but I know the odds of winning so I don't go on them too much! I do have a strong memory of when I was first programming a fruit machine and getting it to stop all three reels, 'clunk, clunk, clunk', in the exact configuration I'd programmed in ten seconds before. That made a real impact – it seemed like magic back then!

> ## "I do miss the camaraderie, when your team are all pulling together"
> *Andy Beale*

▶ version of *Magic Carpet*, before moving over to PlayStation development and joining the team working on the third instalment in the *Populous* series. "I knew Sony's console was easier to program so I really happy with the change," he grins. "You could get a lot more out of it without jumping through hoops like you had to on the Saturn."

Despite Bullfrog bulging with interesting new projects, Andy's penchant for warmer climates meant in 1997 he was tempted across the pond to San Francisco on America's West Coast, joining a startup studio working on a PlayStation title based on the-then burgeoning *Stargate* franchise. The game, a third-person sci-fi adventure with some nifty animation, was shaping up nicely, but was abruptly cancelled, leading Andy to move to Universal Studios' videogame division in San Jose. There he worked alongside *Dino Dini* of *Kick-Off* fame on a game based on the studios many classic 'monster' franchises, such as *Frankenstein* and *Dracula*, but when that project stalled, he switched from fangs to flesh to work on *Xena: Warrior Princess*. Did he get to meet the badass star of the TV show, Lucy Lawless, we ask hopefully?

"No I never met her and wasn't really into the television show," he admits to us, "but I really enjoyed the project. I got to do lots of the special effects, some of the boss characters and engine optimisations. The PlayStation libraries really helped and it was a nice change from the Sega Saturn that I had come from with its many processors and the PlayStation 2 to come, with its. I certainly didn't feel restrained by the licence. It didn't matter if things were in the show or not, we just wanted to make it look good!"

As the new millennium dawned, Andy got to ply his PlayStation programming prowess on *Dead To Rights*, an original project for industry stalwarts, Namco. "It felt like a prestigious thing to be working for them," he remembers, "and there was a big team of over 50 people. It was a long way from the 'one-man-band' days. Letting you play as the dog was fun and it was pretty neat the stuff you could make it do. We had a good feeling about the game during development and we were always striving for 60 frames per second. At E3 in 2002 it got the award for 'Best Action Game' though it was a bit rough round the edges."

The game had plenty of good ideas and we enjoyed the rhythm action section set in a nightclub a little too much, though its reliance on bullet time shoot outs inevitably led to less than favourable comparisons with the *Max Payne* series. Working on the PS2, Xbox and GameCube versions of *Dead To Rights* gave Andy a broad view of the contemporary console landscape and after two decades years making games, new vistas beckoned. Now with a wife and two children, Andy decided the long hours on crunch time, weekend working and the instability of a career in games development were no longer for him. Since leaving it all behind in 2002, he has formed his own company, moved into audiovisual production and has dabbled with electronic music, but doesn't completely rule out a return to game-making.

"There are lots of things I don't miss, like the crunch times," he says, "but I do miss the camaraderie, when your team are all pulling together. And I will always have a soft spot for the Eighties and the games and computers of that era." Us too Andy, us too. ✱

Trivia

During his time at Electrocoin, Andy worked on an unreleased adaptation of *Mr. Do!*. Somehow this small UK-based coin-op company had got hold of the source code, though it seems unlikely this was an official deal with Universal.

Mega changes that gives fleas and mushroom trails!

```
1570 LET G=G+1 :LET F=R+1 :PRINT
AT PEEK R, PEEK F... :LET G =
PEEK R * 32+PEEK F+P
1575 POKE G,Ø :IF RND>30000
THEN IF PEEK R< 19 THEN
INK 4: POKE G,79: PRINT AT
PEEK R, PEEK F. "Ø":
1580 POKE R, PEEK R+1 :IF PEEK R
=22 THEN POKE R,Ø :GOTO 1610
```
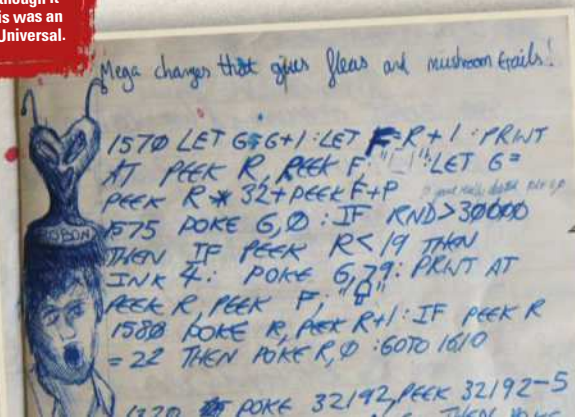
Andy's Desert Island Disks

01 Defender (ARCADE)
It was the first fast, really challenging and impressive arcade game. I loved the particle explosions, the smooth 50fps refresh rate, the unique sounds of the time and although the controls were daunting at first, with time you could master them and keep that 10p going!

02 Robotron: 2048 (ARCADE)
I chose this for similar reasons. Very challenging, and you need really fast reaction times. The first time you stick your 10p in it, you're going to die in about five seconds, but you know you can get better.

03 Sinistar (ARCADE)
You can see a theme here? When that Sinistar creation was built and started chasing you, screaming… it was terrifying!

04 Space Invaders (ARCADE)
It really was a classic that got the whole videogame thing going. It had that perfect balance of gameplay and everything about it felt just right. In the arcades, I was just as happy watching people play and learning the best techniques as playing myself.

05 Galaxian (ARCADE)
It was the next stage after *Space Invaders*. It was the drone when they came down, all the sound effects and the colour, of course… it all felt very novel.

06 Battlezone (ARCADE)
It was the first 3D arcade game I saw. That was a definite pull. I used to go to this bowling alley, not to bowl but to play the arcade games, and there was a guy installing it. I just remember thinking, 'Wow, I've never seen anything like this before'. It really captured the imagination.

07 Asteroids (ARCADE)
I first saw it at a chip shop after school and it was the first vector game I'd seen. All those techniques you could learn, like keeping one asteroid going and waiting in the corner for the saucer to arrive. I was a lurker!

08 Jetpac (ZX SPECTRUM)
Like everyone else, this really impressed me. It was arcade-like quality on the Spectrum and that really hit you. Ultimate really knew what they were doing and that laser weapon was just like *Defender*.
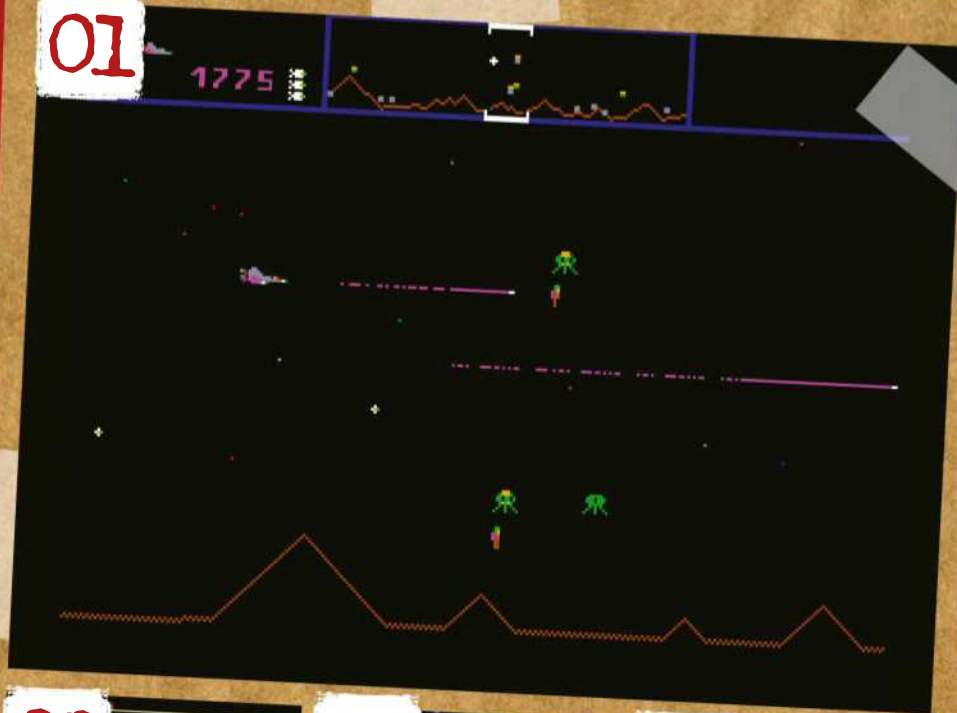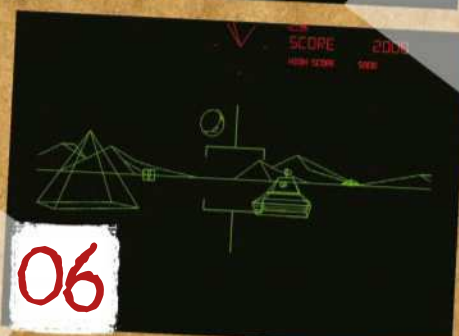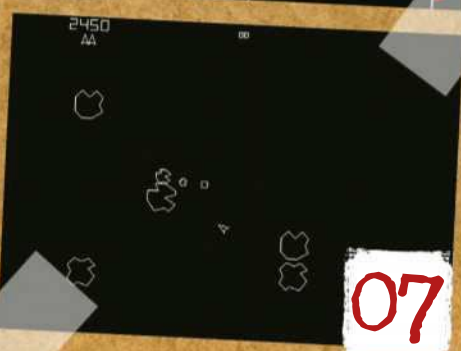
Taken from Andy's Spectrum notebook from 1983, this is the code for adding the fleas in Megapede.

ENEMY

LIFE x2

Renny Blaster

LEAVE MY ANTACIDS ALONE!

RETROREVIVAL

» **PC ENGINE** » **1995** » **NEC AVENUE**
Until recently, I figured that I wasn't the sort of person to spend a lot of money on a game. Certainly not more than £100.
I'd occasionally splash out if a game I really, *really* wanted had a cool collector's edition, but I'd never go bananas for a regular one. But a Neo-Geo MVS copy of *Garou: Mark Of The Wolves* looked too tempting one day, and I haven't regretted it. Sure, I could get lots of great games for the price, but I'm hardly short on games to play as it is – I may as well make fewer, larger purchases.

As a result, I've been looking towards my next big purchase, and since my PC Engine collection is pretty small I decided to start there. *Renny Blaster* caught my eye, as it feels like an oddity. It's a single-plane beat-'em-up from the mid-Nineties, almost as if games like *Renegade*, *Double Dragon* and *Final Fight* had never happened. It's got a horror theme without being as gratuitous or cartoonish as the likes of *Splatterhouse*. There's even a good bit of complexity crammed into the controls, with running attacks, various specials and more.

Yet it's not a game I find myself in love with – and for that sort of money, it has to be. Sometimes it feels just a bit too clunky, sometimes the backgrounds are just a little too static, and ultimately it's just not quite good enough to convince me to break the bank. Luckily, I still have plenty of obvious choices like *Castlevania: Rondo Of Blood* to fall back on. ✳

The C64 Mini

BEIGE IS BACK

The invasion of the mini consoles is well and truly on – Nintendo has made a roaring success of its NES and SNES lines, Sega has just announced that it's shrinking down the Mega Drive, and in the present The C64 Mini has arrived. For those of you unfamiliar with the device, it's a 50 per cent scale miniature of a breadbin Commodore 64, with 64 preloaded games, 720p HDMI output and an authentically designed Eighties joystick.

Opening the box, the presentation of the device is very attractive and the bundled documentation explains how to use the system sufficiently well. However, it is only a quick start guide – for more complete instructions and manuals for all of the games, the printed booklet directs you online. The unit itself is pleasing to the eye and very cleanly designed. HDMI and micro USB power input can be located on the back of the console, plus two USB ports and a power button are on the side. Set-up is easy and booting is very quick.

The game selection menu is attractive and shows box art, a brief game description and a screenshot. A jaunty SID tune plays as you browse the games on offer, and it can be muted if you prefer. A few menu options sit below the list of games: a system menu that allows you to set the region of your USB keyboard and update firmware, a language selection menu, and a screen settings menu. This offers you the ability to play with a pixel-perfect display or choose PAL and NTSC 4:3 ratios, as well as the opportunity to apply a CRT filter. This is a nice inclusion, although the filter can't be customised further to alter blur and scanline strength.

With a system that hosted as many games as the Commodore 64 did, it's practically impossible to curate a list of games that will include everyone's favourites. Still, the selection of built-in games represents a valiant effort to

» [C64 Mini] The C64 Mini offers screen modes to suit a variety of preferences, including a CRT filter.

» [C64 Mini] As is to be expected, the HDMI output is clear and crisp, although it is limited to 720p.

>> This month we take a look at The C64 Mini, play through the sixth Yakuza game and shoot down some dragons. Good times

★ PICKS OF THE MONTH

DARRAN
Dragon Blaze
It's a shoot-'em-up which has dragons in it. Dragons are like winged dinosaurs. Of course I'm enjoying it.

NICK
Yakuza 6: The Song Of Life
I've got a soft spot for *Yakuza*'s antihero Kazuma Kiryu and his mad antics.

Star Paws

Play as captain Rover Pawstrong. Help him chase and catch 20 space griffins, above and below the surface of the moon. Use the radar to catch each bird-like creature. Try jumping on the griffin or use items from boxes found on the surface. Items include a mining lamp, rockets, anti-gravity pads, weapons and food to replenish Pawstrong's dwindling health.

Author   John Darnell
Composer Rob Hubbard
Genre   Platform   Year 1987

» [C64 Mini] This attractive menu is typical of the care that has gone into presenting The C64 Mini.
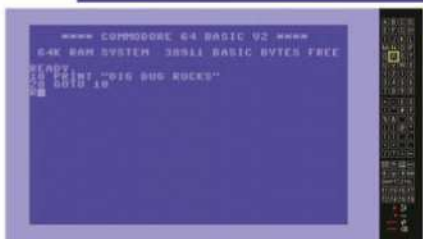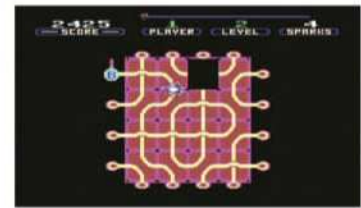
» [C64 Mini] The virtual keyboard uses the widescreen format well, shifting the display so nothing is obscured.

present some of the system's greatest hits. The likes of *Armalyte*, *Boulder Dash*, *Creatures*, *Impossible Mission*, *Jumpman*, *Paradroid*, *Pitstop II* and Epyx's Games series all feature in Lemon64's user-voted top 100 games list, and that's a list that doesn't even include great games such as *Uridium*, *Deflektor* and *Monty On The Run*. If you're new to the system, this isn't quite the one-stop shop that Nintendo's miniature plug-and-plays are, but it's a very good introduction.

Better yet, it doesn't have to be quite that comprehensive, as The C64 Mini officially supports loading additional games via USB. Using the system's Commodore BASIC interface, you can load games through an emulated disk drive. Unfortunately, this is a bit clunky – the file has to have a specific name, which means only one file is loadable at a time. While you can pack multiple games into a single disk image, it's an awkward process that detracts from the plug-and-play simplicity of the console. Additionally, with the system offering only two USB ports, you'll need a USB hub if you want to have access to both the keyboard and joystick.

When it comes to controlling the games, the selection on board has

been carefully chosen for joystick control. A menu button on the keyboard allows you to exit games, access save states (up to four per game) and bring up the virtual keyboard for the games that require occasional key presses. This is much more convenient than placing the reset button on the system itself, as Nintendo's machines do. You can also use a USB keyboard instead of the virtual keyboard – a real lifesaver if you plan to run text adventures, and it's a big advance over the likes of the ZX Spectrum Vega. We're not all that keen on the joystick, though. After years of using joysticks with a longer throw and microswitches, it feels like a bit of a step backwards.

While this is clearly a package that has been put together with some care, it's not without some drawbacks. One particular issue that we noticed was input lag. We observed a very small amount of delay between stick movements and button presses, and how they play out on screen. If you've already taken steps to minimise your TV's input lag, you might not notice it unless you look for it – but if your TV already exhibits considerable input lag,

The C64 Mini is going to suffer. Of course, it's worth noting that hooking up original C64 hardware would probably result in similar problems given that analogue display conversion in modern TVs is not geared towards speed, and even a great upscaler will only do so much to mitigate that. Hopefully, this issue can be mitigated with future firmware updates.

Additionally, with these games coming from a time before tutorials and hand-holding became the norm, it really would have been nice to have at least basic game instructions available on the machine itself. It's often incredibly hard to know what you're meant to be doing and how to do it, and having to refer to online manuals does detract from the immediacy of the plug-and-play experience.

In all, if you still love C64 games, this is a fun way to revisit them. We'd have preferred a more comfortable joystick, easier loading of your own games and lower input lag, but in all other respects The C64 Mini delivers. Nintendo's plug-and-play machines remain the best in class when it comes to doing justice to the source material, but the experience here is definitely a step up from other plug-and-play devices we've looked at in recent times. ✳

In a nutshell

The C64 Mini is a good attempt to deliver a nostalgia console for the home computer kids. The biggest bugbear is the input lag, which will depend on your TV. A revised model could potentially achieve greatness, but this is still worth investigating.
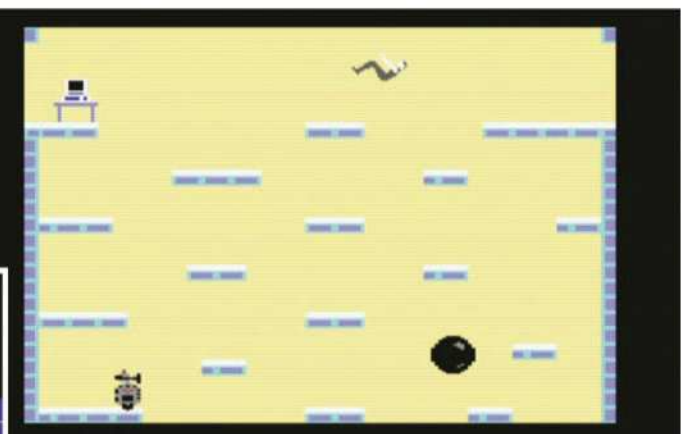
» [C64 Mini] Here's the CRT filter in action – the blur and scanlines are good, but the strength of the effect can't be adjusted.
» [C64 Mini] Up to four save states can be used per game, via a simple menu – a nice touch, for sure.

✱ PICK OF THE MONTH

Yakuza 6: The Song Of Life

» **System:** PS4   » **Buy it from:** Retail, online   » **Buy it for:** £49.99

After over a decade on our screens, Kazuma Kiryu is finally ready to ride off into the sunset – but not before finding out what happened to his adoptive daughter Haruka, who disappeared and was injured during his most recent stint behind bars. Once again, this involves exploring open city environments (Onomichi, Hiroshima and the familiar fictional district of Kamurocho, Tokyo), getting into fights and indulging in the countless distractions on offer.

As compared to recent games in the series, *Yakuza 6* has a reduced scope. Where *Yakuza 4*, *Yakuza 5* and *Yakuza 0* all featured multiple protagonists, the latest game places the focus squarely back on Kiryu. Likewise, Kiryu's multiple fighting styles from *Yakuza 0* have been dropped, and even the city environments are slightly smaller. This is because *Yakuza 6* is the first game in the series using a new engine, and it does offer some worthwhile improvements. As well as graphical improvements, the game now transitions seamlessly between indoor and outdoor environments, as well as between

exploration and fighting. The result is less wasted time on transitional screens, making everything a little more inviting.

Still, there's plenty of stuff to do. The frequent and often bizarre side quests that have become a staple of the series are as prevalent as ever, and remain engaging – you'll never guess how a Siri-style smart assistant gets you into fights, for example. It's also a good Sega compilation in its own right, thanks to the in-game arcades. As well as *Out Run*, *Super Hang-On*, *Space Harrier* and *Fantasy Zone*, there's a version of *Puyo Puyo* and a conversion of the brilliant *Virtua Fighter 5: Final Showdown*, complete with multiplayer.

Of course the main game is what you're really here for, and it doesn't disappoint. The skill progression system is a bit cumbersome, and the writing isn't always the strongest, but there's enough intrigue to keep you hooked between the satisfyingly brutal fights. *Yakuza 6* comes recommended, no matter whether you're a fan or a newcomer.

» [PS4] Occasionally, Kiryu picks up a partner with whom he can enjoy cracking skulls.

» [PS4] This poor thug is about to have his neck introduced to Kiryu's knee.

>> **Score 86%**

Detective Pikachu

» **System:** 3DS   » **Buy it from:** Online, retail
» **Buy it for:** £34.99

Tim Goodman's detective dad has gone missing, and with the help of his Pokémon partner Pikachu, he's trying to track him down. There's a lot to be said for this new characterisation of Pikachu – it's hilarious to see the critter guzzling down coffee, trying to be a ladies' man and investigating incidents. The game is also presented to a very high standard, with excellent visuals and some good voice acting.

Unfortunately, the mystery gameplay isn't quite so engaging, besides occasional QTEs and arranging evidence to uncover the reality of events is your task. Solving the simple logic puzzles is rarely challenging. Younger players will appreciate it, but adults are advised to play *Ace Attorney* and *Danganronpa* instead.

>> **Score 59%**

Dragon Blaze

» **System:** Switch   » **Buy it from:** Switch eShop
» **Buy it for:** £6.99

We've not played this shooter since it was part of an old PS2 compilation, so it's pleasing to see how well it still stands up. Mechanically there's a lot going on in *Dragon Blaze* thanks to the use of charged and standard shots, which ensure you can tackle the wave of enemies and bosses in numerous ways. Your dragon mount also play a key role in *Dragon Blaze*'s mechanics, as it's possible to dismount it whenever you want, providing additional firepower (at the expense of making yourself an easier target as you continue the fight on-foot).

Dragon Blaze is a little more bullet hell-heavy compared to other Psikyo blasters, but it looks fantastic, has a decent difficulty curve and will take an absolute age to beat it with one credit.

>> **Score 71%**

Battletech

» **System:** PC (tested), Mac   » **Buy it from:** Online
» **Buy it for:** £34.99

Harebrained Schemes continues its love of old franchises by updating the once popular board game, which spawned the popular *MechWarrior* series. It takes many elements from the board game and also takes inspiration from the *XCOM* series. It's an interesting move, allowing your squad of up to four mechs to take part in all sorts of different missions. There's a wealth of mechanics to juggle, including overheating weapons and line of sight, but it rarely feels overwhelming thanks to a good informative UI and camera.

It's a little clunky in places, due to some fiddly control choices, but that doesn't stop *Battletech* from being a highly engrossing time sink for those who love mechs.

>> **Score 77%**
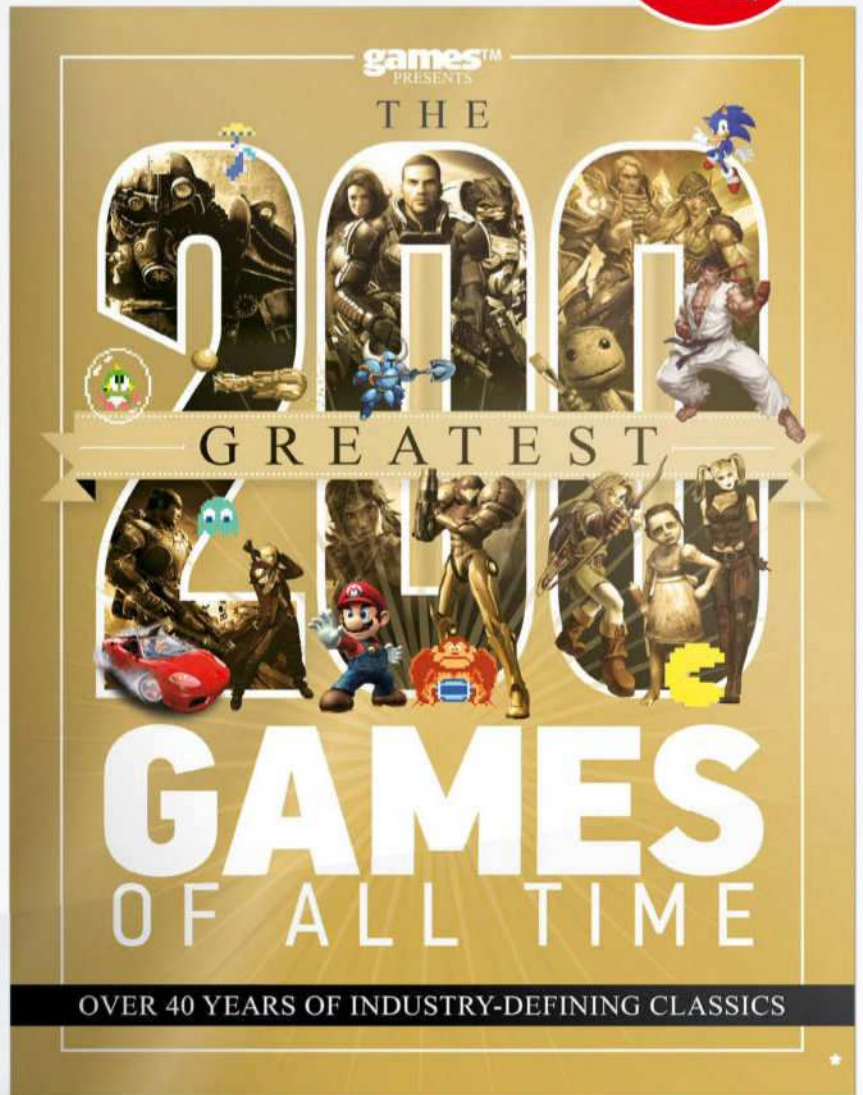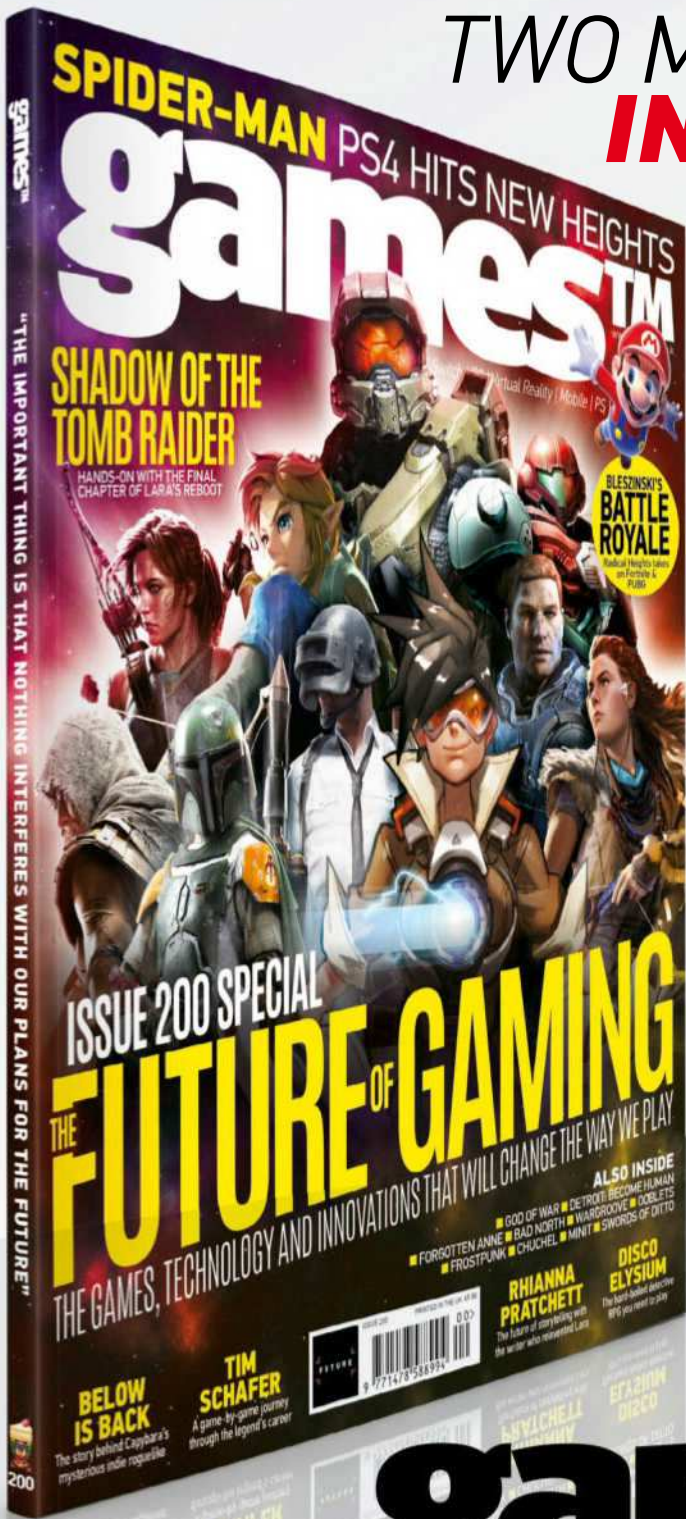
» [C64] Adding new meaning to the phrase "the daily grind".

$5.75

» [PICO-8] *The Dead Seconds* are ticking away rapidly.

» [PICO-8] Adding time together to make 60 seconds in *What Is Minute*.

FANTASIES AND MUSICIANS

Crank Crank Revolution on the C64 is, bizarrely, a street musician simulator where the player grinds an organ by rotating their joystick. To attract an audience, the speed must be just about right and, as money is earned from people passing by, the monkey can be sent in to collect it by holding down the fire button. Leaving some cash on show draws in more watchers but it's something of a balancing act since too much in the hat will attract the attention of the police. Apply for a busking pitch over at Kikstart.eu/crank-crank-c64.

The Fantasy Console Game Jam 3 was a small two-week competition encouraging developers to make new games for consoles that don't actually exist; systems like the LIKO-12, TIK 80 or PICO-8 all offer retro-style graphics and sound without actually emulating

a retro system and the PICO-8 in particular appears to have picked up a significant following since its launch. This game jam had a reasonably open to interpretation theme of 'one minute' and all of the code and assets within each entry had to be created within the space of a week.

Mazeborn is a *Gauntlet*-style top-down action game inspired by *Bloodborne* and the *Souls* series where each procedurally generated dungeon only exists for 60 seconds before it changes around the player. *Late For The Date* is a tricky platformer where a cute blue creature has to avoid hazards and collect flowers for his date while *Red Zone Rush* involves surviving various forms or aerial bombardment on a rapidly dwindling island and for those wanting a slightly more cerebral platforming challenge, *Barrel Force* has

some puzzle solving mechanics where shooting the titular barrels will cause area-clearing explosions.

On the shooting front, *Dead Seconds* is a run-and-gun affair set against the clock and sporting a stylised graphical style where downed enemies leave behind time bonuses, while *Monster Love* is an arena shooter about a man being kept waiting by his girlfriend and 'hulking up' to kill innocent bystanders as a means for relieving stress. There are a few games which play with the theme a little as well, such as *What Is Minute* where a cute little blob must collect scattered blocks of seconds to make 60 in total. The game jam culminated with 29 entries – 23 of which can be played from the comfort of a web browser – and they can all be found at Kikstart.eu/fantasy-jam-3.

NEW GAMES NEEDED

If you have a homebrew project you would like to see featured then please contact us at: **darran.jones@futurenet.com**

· HOMEBREW HEROES ·

Patrick Nevian's Amiga games set in the world of Gorluth have previously been RPGs, but the next one, Heroes Of Gorluth, is going to be a platformer. We went on a fetch quest with him to find out why

What have been the inspirations for *Heroes Of Gorluth*?
I have to admit that at first I didn't want to develop another action RPG for the Amiga. *Tales Of Gorluth* I and its sequel required a lot of work and patience due to the *Zelda*-style gameplay. But I still had some ideas in mind for a third part.

In December 2017 I stumbled over some cool platformer tilesets and they gave the final inspiration for the *Gorluth* spin-off.

How many people are involved in the game's development?
It's basically only me. I licensed the tilesets and sprites and converted them carefully via Paint for my Amiga game. So, of course, I am also responsible for the game design, the soundtrack/sound effects, additional graphics and the storyline.

Recently, I contacted Ozan from the demoscene group Desire. He will contribute some cutscene pictures.

» A programmer's workbench, both literally and figuratively.

» [Amiga] Getting close to the heart of the map.

And roughly how long does something like *Heroes Of Gorluth* take to create?
I set a personal schedule for one year. So the final game will be finished in December 2018. I'm well within the time schedule and hopefully there are no major bugs encountered in the future.

I'm currently working on a town level and an underground section below this village. After that there are three worlds left – forest, winter, stronghold – and each world consists of three to four levels.

The gameplay has changed from previous instalments, where did the idea for that come from?
Well, *Tales Of Gorluth* I and *Tales Of Gorluth* II heavily focused on complex storytelling and lots of text.

I love games like *Cadash* on the Mega Drive, though, and I think this kind of gameplay also fits into the *Gorluth* universe. So I decided to come along with a more action-oriented approach.

Another reason: platformers are much easier to develop and so I'll combine riddles and conversations from RPG's and adventure games with traditional side-scrolling action.

And finally, do you have any future games our readers would be interested in?
I'm also working on a game called *Oh No! More Aliens!* for Ares Computer. It is progressing slowly though, due to real life things as the production of the new album of my band Blue May Rose. But I for sure won't stop producing Amiga games in the near future.

» [Amiga] Exploring is always easier with a map.

» [Amiga] The tide has gone all the way out today.

» [PC] Getting into a flap while collecting eggs and landing in nests.

FOR THE BIRDS

Currently being developed is *Egg Lander,* a web-based action game which has been inspired by the arcade classic *Lunar Lander*. The controls are based on rotation and thrust but the sprite being guided is a bird who must wing its way around the screen and sit on all of the nests to clear a stage; if there's some spare time a score bonus can be earned by collecting eggs as well. Fly over to Kikstart.eu/nest-lander-web for a play of the demo version.

> ❝I love games like Cadash on the Mega Drive❞

» [ZX Spectrum] Considering options when realising the shopping centre has vanished.

GO ADVENTURING

In this adventure Karl is an author who, it seems, is losing the plot somewhat. The painting in his spare room vanishes and his partner denies any knowledge of it could be put down to a number of things, but Karl starts to doubt his own sanity when visiting the local shopping centre only to find that has vanished too, with nobody else remembering it.

In Nihilum Reverteris is a piece of interactive fiction on the ZX Spectrum from developer Yerzmyey with an intriguing story. If you're interested, there's a download at Kikstart.eu/ in-nihilum-spec assuming it hasn't mysteriously disappeared.

» [Atari 8-bit] Dealing with a deadly space mine pretty much by accident.

Warspite is a space-bound scrolling shooter based loosely on the Thalamus classic *Delta* that was originally destined for a budget release, but ended up being given away through the Commodore 64 demo scene.

Destroying an entire wave of attacking enemies or a boss will change which icon in the power-up bar at the bottom of the screen is highlighted – there are three for extra speed, more bullets and a shield – and, when the desired icon is lit, a slap of the space bar activates it. These extra weapons don't last however, so they will need the occasional top up to keep them active.

More information about *Warspite*'s history and a download can be found at Games That Weren't behind Kikstart.eu/ warspite-c64 – please note that there's some harsh language in the game's trainer menu.

» [C64] The boss isn't exactly pleased to see an invading spaceship.

» [C64] Entering the space city and defeating some enemies.

BOSCONIAN

» **PLATFORM:** ATARI 8-BIT » **DEVELOPER:** JANUSZ CHABOWSKI » **DOWNLOAD:** KIKSTART.EU/BOSCONIAN-A8 » **PRICE:** FREE

The subjugation of Earth didn't take very long, the Bosconians turned up with a fleet of huge orbital platforms which allowed them to pelt our planet with meteorites. The Federal Council – what remains of Earth's superpowers, for once working in harmony – have created a space fighter capable of striking back against the invaders, but the absolute secrecy required to keep this activity from the enemy means there's just the one craft. And now the time has come for it to blast off and destroy the Bosconian orbital platforms to free mankind once and for all from the invaders' tyranny.

Each stage is a sector of space containing a number of platforms, meteorites and space mines which the player can navigate through in any direction, using the radar to locate both their targets and the occasional formations of enemies sent to hunt the invader down. There aren't any power-ups available but the ship's weapon simultaneously fires forwards and backwards which can, with a little

practise, be used to pick off enemies while flying away from them. The platforms themselves are destroyed by shooting all six of their gun pods or putting a well-aimed bullet into the exposed reactor core, with the latter becoming trickier to pull off.

Bosconian is no-nonsense blasting based on Midway's coin-op of the same name. It's a sturdy conversion albeit with less forgiving collision detection which needs to be allowed for and, while the game is relatively quiet for the first couple of levels, the playfield soon fills up with enemy fighters and projectiles to the point where planning goes out of the window and survival instincts kick in.

One technical feature worthy of note is that there are multiple versions available, a 'full-fat' 128K release which features the speech from the original coin-op and a 'semi-skimmed' version for 64K users – that's something to be commended since not everybody has an expanded Atari 8-bit.

» [Atari 8-bit] And cue a very large explosion in three, two, one…

» [Atari 8-bit] Only two platforms left but being chased by a wave of nasties.
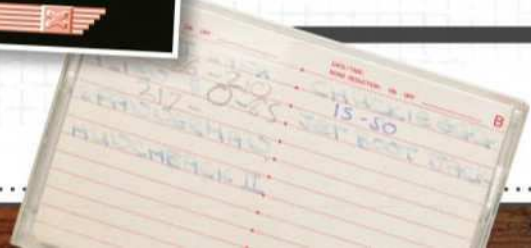
\>> Score **85%**

STEEL RANGER

» **PLATFORM:** COMMODORE 64 » **PRICE:** $4.99 DOWNLOAD
» **DEVELOPER:** COVERT BITOPS
» **DOWNLOAD:** KIKSTART.EU/STEEL-RANGER-C64

» [C64] Popping outside for a quick nose around probably wasn't a good idea for our hero.

Heading into the black yonder and accidentally stumbling across a deadly rival would in itself be unlucky, but mankind's expansion towards the stars in the 23rd century is unexpectedly halted by the discovery of forces under the control of a dangerous machine intelligence.
The crew of the Scourge are sent out to investigate the mysterious signal emanating from a supposedly barren planet only to come under fire from the machine forces. The player takes control of the only crew member to don their Ranger armour before the ship crash lands and therefore has to start the mission alone, picking up weapons, power and parts along the way.

Steel Ranger is the latest game from Lasse Öörni, the developer behind the *Metal Warrior* series and more recently *Hessian* and won't disappoint fans of those games. It's a little more arcade-oriented than previous outings but still a very solid run-and-gun experience.

»   Score **84%**
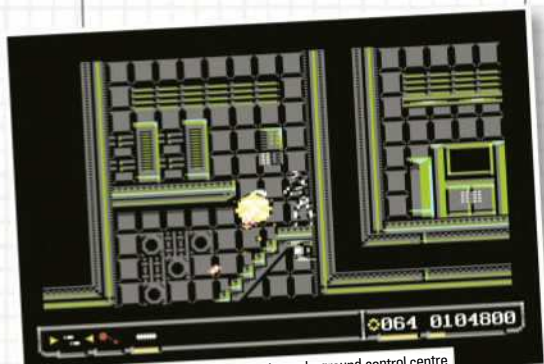
» [C64] Dealing with a security device in the underground control centre.

SUPA ZAZAI DA!

» **PLATFORM:** ATARI ST/FALCON » **DEVELOPER:** CEREBRAL VORTEX
» **DOWNLOAD:** KIKSTART.EU/SUPA-ZAZAI-STE » **PRICE:** FREE

Former model Maria Whittaker has been kidnapped by the stars of various Sega, Atari and Nintendo franchises to be used as a hostage in order to keep her boyfriend Dr Floyd from releasing new, high-quality videogames.
Our programming hero therefore sets out to rescue the poor woman from their clutches, which will be achieved by heading into space and blasting loads of game sprites before taking on a larger enemy at the end of each stage. The good doctor only gets the one life so care must be taken to dodge his attackers and the copious amounts of bullets they're firing.

Supa Zazai Da! has an amusingly silly plot – and a chance to play 'spot the sprite' – wrapped around some simple but enjoyable blasting action; the collision detection is generous but it's still satisfying to scrape through clouds of bullets by the skin of Dr Floyd's teeth.

»   Score **81%**

» [Atari ST] Inexplicably coming under attack from Kirby and company.

SHEEP IT UP! 00010
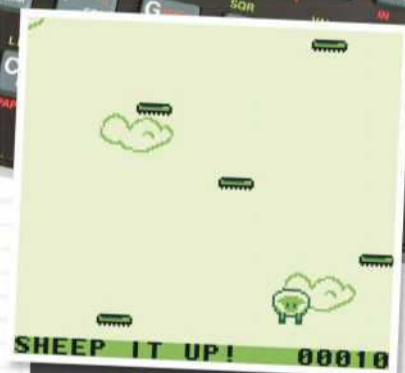
·ROUNDUP·

We spoke to Dr Ludos a few issues ago about his Game Boy release *Sheep It Up!* where a cute sheep jumps between pieces of Velcro. It can be purchased on cartridge, and the author has recently made the game available as a download from Itch.io as well for use with emulators. Kikstart.eu/sheep-up-gb will take you to more info.

A much darker, more fiery release is *Burn Us*, the first entry into the MSXdev competition this year. The player's character is part of a weird cult that self-immolates, so the game sees him running and climbing around the stage and avoiding enemies, while locating a can of petrol, a lighter and, finally, the cult's sacred altar. The download can be found smouldering behind the link at Kikstart.eu/burn-us-msx.

LUNATIC – STARRING MINER WILLY

» **PLATFORM:** WINDOWS » **DEVELOPER:** DANIEL MAY » **DOWNLOAD:** KIKSTART.EU/LUNATIC-MW-WIN » **PRICE:** FREE

Miner Willy's life is far quieter than it used to be back in the Eighties. For a start he's living at the Golden Pastures retirement home which is where we join him waiting patiently for his morning medication to start working just as an unmanned rocket unexpectedly lands in the grounds. Whizzing off to the moon for a spot of mining suddenly seems like a terrific idea and that's exactly what Willy does.

There are 300 gems to be found but most of them are difficult to reach – a few might initially seem impossible if there weren't helpful power-ups to aid in their collection – and it wouldn't be a Miner Willy game without some weird, deadly creatures patrolling the platforms and the moon seems well stocked on that front. *Lunatic* is a homage to Matthew Smith's seminal games, so it's challenging and sometimes frustrating, but fans of the series should enjoy it.

» [PC] Willy returns to his roots with a spot of spelunking.

» [PC] There really is water on the moon, and look: it's inhabited too.

»   Score **77%**

MAIL BAG

HAVE YOUR SAY... SEND US A LETTER OR MAKE YOURSELF HEARD ON THE ONLINE FORUM – **WWW.RETROGAMER.NET**

TEAM PLAYS

STREET FIGHTER III: 3RD STRIKE

Trying something a little different than the usual score chase this month, we set up 3rd Strike and had ourselves a mini-tournament

HEAT 1: DARRAN vs DREW
Drew tried to go all-in using Chun-Li's lightning kicks and Spinning Bird Kick, but he underestimated Darran's prowess with Hugo's command grabs. Chun-Li ended up a crumbled mess under Hugo's body slam. Victory to Darran on this one.

HEAT 2: NICK vs SAM
A classic Ryu-versus-Ken matchup resulted in a win to the former. It comes as a shock to nobody that Nick (who is very good at *Street Fighter*) demolished Sam (who is *not* very good at *Street Fighter*).

FINAL: NICK vs DARRAN
Nick's strong on the offence for the first match, but the Darran Jones Factor™ is too much for him. Our Handsome Staff Writer claws two victories afterwards, though, making him this month's champion.

WINNER: NICK

» [Arcade] Nick's calculated brain managed to remain cool after his first loss in the final.

» [Atari 2600] Tod Fry's *Pac-Man* is still dividing readers some 37 years after its release.

PAC-ATTACK
Dear **Retro Gamer**,
I will never forget my excitement as a 13-year-old when I saw the Atari ad announcing *Pac-Man* for the 2600. But when I saw the game on my TV screen several months later, it was an instant letdown. For me, the flicker was awful, the colours were ugly and *Pac-Man* himself was a clunky imposter. I knew Atari could do better. With all due respect to Tod Frye and the deadline and space limitations he faced, and to all the fans who enjoyed the game, it's not fair or accurate – and frankly a bit of revisionist history – to suggest that mainly only critics, mean bosses and 'tribal fanboys' didn't like the game. For me, it was my first Atari disappointment.

I think it's good you provided a forum to enable Todd Frye to tell his side of the *Pac-Man* story, but I wish your article spent more time conveying and acknowledging ordinary readers' reactions to the game than seemingly trying to please Mr Frye, whom I'd imagine you'd want to keep in your good graces for future interview requests.
Ben Stein

PAC 'N LOVE
Dear **Retro Gamer**,
I'm thoroughly looking forward to reading this month's cover story, and would like to make my own case for the defence of *Pac-Man* on the 2600.

Myself and my pals and cousins were about ten years old when *Pac-Man* reached the console, and we don't remember any dissatisfaction or complaint about the game. We knew, even back then, that consoles couldn't yet match the arcade, and those who didn't visit arcades wouldn't know any different, obviously.

Pac-Man seemed like… *Pac-Man*. It played well, it was fun, and its zany sound and basic graphics were part of its character. For example, the 'scared blue ghosts' of whom the flickering represented their fear!
Tom Vanheems

We've had quite a few emails this month similar to Ben and Tom's. It would appear that even now, nearly four decades after its original release, Todd's conversion of *Pac-Man* delights people as much as it annoys them. *Pac-Man* on Atari 2600 may not be the most accurate of conversions, but it remains fun to play and ultimately that's all the matters. Isn't it?

MORTIMER WHO?
The other day I was rereading Load 167. I came across the article on *Thimbleweed Park*, and it reminded me of on my favourite series from the late Noughties: *Mortimer Beckett*. I would love it if you guys could do an article on it. Thank you.
Deraj Nagar

» [PC] Games like *Mortimer Beckett* are usually found on PC, but became more popular with the rise of iOS and Android.

STAR LETTER

ART ATTACK

Hi Retro Gamer,
I wanted to share a project I just completed with you! Every week for 28 weeks I have picked an arcade game and created a piece of art for it. You can see each piece of art on the my website at: https://arcadeartbytupa.wordpress.com. I thought it might be a good fit for you.
Christopher Tupa

Thanks for thinking of us Christopher. The art looks great and you've clearly got great taste in arcade games. Let us know if you plan to cover any other systems from back in the day, as we'd love to see them. In the meantime have a book for your troubles.

» Here's a few of **Christopher**'s fantastic pieces of artwork. We particularly love the *Golden Axe* one.

To be honest Deraj, we've never heard of this actual adventure series, which is surprising, as Darran loves 'hidden object' games. The franchise itself is probably a little too new to cover in the magazine, but a look at the actual genre certainly might be worth exploring.

THANK YOU FOR THE MUSIC

Hi, **Darran**
Just want to post a big shout of thanks to you and your team for releasing the cover-mounted CD of music from C64audio.com.

I think that this is great because not only are all the tracks amazing, but it supports the remix scene and promotes it. Also I can finally say, that C64 music has hit the big time and is available in your local supermarket!
Martin Dodd

We're glad you enjoyed it Martin. The CD appears to have gone down very well with many of our readers, so don't be surprised if we do similar things in the future. We quite like the idea of a Sega arcade soundtrack, for example.

» We're glad you've been jamming to C64 Remix's tunes.

CAN'T SLEEP A WINK

40 Winks is a really decent 3D platformer. Not groundbreaking, but fun and atmospheric. Unfortunately it's only on the PlayStation, which isn't my favourite console. It's supposed to be coming out on the N64 in September. If it does will you be reviewing it?
Tom Wedley

Glad to hear you're looking forward to *40 Winks,* Tom. If we receive review code we'll certainly be interested in covering it. It will certainly be interesting to see how it holds up today.

DISCUSSED THIS MONTH

Hearthstone
The release of a new expansion has pulled Darran and Drew back in to Blizzard's excellent card game. Darran has gone the money route, while Drew is being far more sensible. They're both trying to convince Nick and Sam to play as well, but so far, it's been to no avail.

» [N64] *40 Winks* will be finally getting a physical release, nearly 20 years after its original planned release.

From the forum

Every month, **Retro Gamer** asks a question on the forum and prints the best replies. This month we wanted to know…

What is your favourite Street Fighter game?

Big Shoes
Mine would be *Street Fighter II Turbo* on the SNES, because that is the one I have played the most. I still play it all the time.

dste
SFII Turbo on the SNES. I also enjoy *Super* with the extra characters, but it just lacks something compared to *Turbo.*

NeppyDreamy
I'd say *Hyper Street Fighter II: The Anniversary Edition* (PS2). Although it didn't do everything perfect, it did offer the CPS1, CPS2 and 3DO version music –

including new remixes for the new characters in the CPS1 style which sound amazing. The analogue sticks are pretty nice to use with the game, and the graphics are faithful to the original games.

kiwimike
Probably *SFII* arcade, although I'm more of a fan of *Final Fight/Streets Of Rage* scrollers personally – and more of a fan of *MKII* style if I am playing one-on-one fighters.

Bluce_Ree
Probably *Street Fighter IV.* It's easy

» [Arcade] *Street Fighter II* remains astoundingly popular with readers.

to forget how impressive it was when it came out, thanks mainly to Capcom milking it to death.

Mayhem
SFII Turbo in the arcade, but *SFIV Arcade* runs it close.

RetroBob
SFII Champion Edition on the

Mega Drive - a great 6-button controller and playing as the bosses bested the SNES version. Nowadays I'll play on either 16-bit console.

smccd
Street Fighter II: World Warrior, because it represented a colossal improvement over the original.

next month

ON SALE 14 JUNE 2018

POWER UP!

Everything you need to know about Mercs, Capcom's super-charged Commando sequel

ALSO INSIDE...

Rock 'N Roll Racing, Savage, Matt Gray, Dungeon Master, Wec Le Mans, Building The Build Engine, EyeToy, 30 Years Of The Mega Drive, Collector's Guide To Software Projects

ENDGAME

STREET FIGHTER: THE MOVIE – CAPTAIN SAWADA'S ENDING

» Cast your minds back to the early Nineties, when Capcom's fighting phenomenon was the hottest thing in arcades. Hollywood came knocking on Capcom's door, and how could the company say no? Of course, if there's a film, there's got to be a licensed game to go with it too – and somehow, we got this hot mess. Let's save ourselves some pain and skip to the end.

01

Leading the Allied National Forces in their assault on General Bison's stronghold,

» We've beaten the game using Captain Sawada. You remember him from the games, right? No, because he wasn't in them. What about his pivotal role in the film? Come on, he was in a few scenes and was referred to by name twice!

02

Captain Sawada demonstrated his unique tactical abilities.

» So what the hecking heck is this bit-part character doing as the only original character in this otherwise unremarkable game? He's representing Hollywood politics, that's what. Well, that and standing in for Fei Long.

03

A strong leader, Sawada has become a symbol for the soldiers in Japan's Self-Defense Force.

» According to director Steven De Souza, Capcom wanted Kenya Sawada – a Japanese actor who was big in Hong Kong – to play the role of Ryu. However, Sawada couldn't speak English at that time, and Byron Mann was cast instead.

04
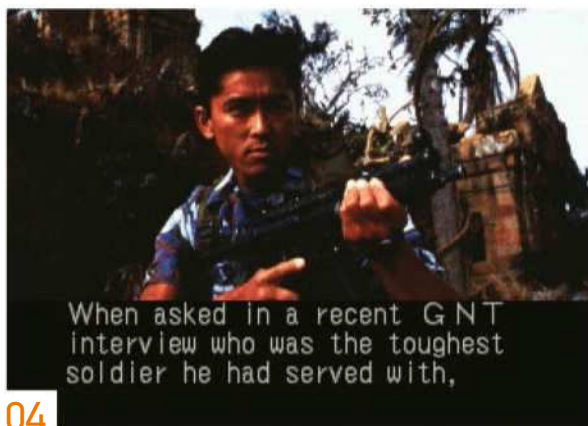
When asked in a recent GNT interview who was the toughest soldier he had served with,

» Between Sawada's persistence and Capcom's insistence, a new role was created: Captain Sawada of the Allied Nations. He'd replace Fei Long (the only *Super Street Fighter II* character not to appear in the movie), and lead a small group of ground troops in the assault on Bison's fortress late in the film.

05
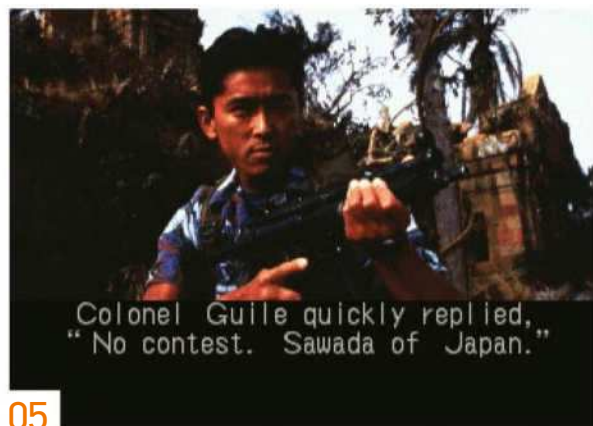
Colonel Guile quickly replied, "No contest. Sawada of Japan."

» How does he play? Nothing like Fei Long at all. In fact, one of his moves involves him stabbing himself to spray blood on his opponents. Offensive? Maybe. Stupid? Certainly. Thankfully, Sawada never turned up in another *Street Fighter* game, and the actor had a successful post-*Street Fighter* career.

In the darkest time always look for hope

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